



PATENT  
Attorney Docket No.: 600-1-087 CIP1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Jeffrey Friedman, et al )  
Serial No.: 08/438,431 )  
Filed: May 10, 1995 )  
For: MODULATORS OF BODY )  
WEIGHT, CORRESPONDING )  
NUCLEIC ACIDS AND )  
PROTEINS AND DIAGNOSTIC )  
AND THERAPEUTIC USES )  
THEREOF )

Group Art Unit: 1812

Examiner: G. Draper

INFORMATION DISCLOSURE STATEMENT  
WITH FORM PTO-1449

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

In compliance with 37 C.F.R. §1.97 and the continuing duty of disclosure under 37 C.F.R. §1.56, the applicants call to the attention of the examiner the enclosed documents, listed on the attached Form PTO-1449, which may be considered material to the examination of the above-identified patent application.

As a courtesy to the examiner and for ease of review, the applicants believe that the documents listed on the accompanying Form PTO-1449 may be organized as set forth below (each listing includes: Form PTO-1449 document number, title, inventor(s), patent number and/or application number, filing date, publication date, and, where applicable, priority dates). As a further courtesy to the examiner, the applicants have included, as

- Appendix A, a copy of the front page of each patent or patent application listed in the IDS and PTO Form-1449.

Pursuant to 37 C.F.R. §1.98(d), copies of the documents are not included herewith since they have been provided in USSN 08/292,345, filed August 17, 1994, and USSN 08/347,563, filed November 30, 1994, which are relied upon under 35 U.S.C. 120 for an earlier filing date in the instant application.

## I. PEPTIDES

### A. Full or Truncated

#### Documents:

A1 Title: "Anti-Obesity Proteins"  
Inventors: DiMarchi *et al.*  
U.S. Patent No.: 5,521,283  
U.S. Appl. No.: 381,666  
Filed: January 31, 1995

A2 Title: "Anti-Obesity Proteins"  
Inventors: DiMarchi *et al.*  
U.S. Patent No.: 5,525,705  
U.S. Appl. No.: 381,370  
Filed: January 31, 1995

A3 Title: "Anti-Obesity Proteins"  
Inventors: DiMarchi *et al.*  
U.S. Patent No.: 5,532,336  
U.S. Appl. No.: 381,034  
Filed: January 31, 1995

A4 Title: "Anti-Obesity Proteins"  
Inventors: DiMarchi *et al.*  
U.S. Patent No.: 5,552,522  
U.S. Appl. No.: 381, 040  
Filed: January 31, 1995

A9 Title: "Anti-Obesity Proteins"  
Inventors: DiMarchi et al.  
U.S. Patent No.: 5,563,243  
U.S. Appl. No.: 381,037  
Filed: January 31, 1995

A10 Title: "Anti-Obesity Proteins"  
Inventors: DiMarchi *et al.*  
U.S. Patent No.: 5,563,244  
U.S. Appl. No.: 381,050  
Filed: January 31, 1995

A11 Title: "Anti-Obesity Proteins"  
Inventors: DiMarchi *et al.*  
U.S. Patent No.: 5,563,245  
U.S. Appl. No.: 381,163  
Filed: January 31, 1995

A12 Title: "Anti-Obesity Proteins"  
Inventors: DiMarchi *et al.*  
U.S. Patent No.: 5,567,678  
U.S. Appl. No.: 381,041  
Filed: January 31, 1995

A13 Title: "Anti-Obesity Proteins"  
Inventors: Basinski *et al.*  
U.S. Patent No.: 5,567,803  
U.S. Appl. No.: 383,649  
Filed: February 6, 1995  
Priority Data: January 31, 1995 (U.S. Appl. No. 381,047)

A14 Title: "Anti-Obesity Proteins"  
Inventors: DiMarchi *et al.*  
U.S. Patent No.: 5,569,743  
U.S. Appl. No.: 381,054  
Filed: January 31, 1995

A15 Title: "Anti-Obesity Proteins"  
Inventors: Basinski *et al.*  
U.S. Patent No.: 5,569,744  
U.S. Appl. No.: 383,632  
Filed: February 6, 1995  
Priority Data: January 31, 1995 (U.S. Appl. No. 381,247)

A16 Title: "Anti-Obesity Proteins"  
Inventors: DiMarchi *et al.*  
U.S. Patent No.: 5,574,133  
U.S. Appl. No.: 381,049  
Filed: January 31, 1995

A17 Title: "Anti-Obesity Proteins"  
Inventors: DiMarchi *et al.*  
U.S. Patent No.: 5,580,954  
U.S. Appl. No.: 381,057  
Filed: January 31, 1995

A19 Title: "Anti-Obesity Proteins"  
Inventors: Basinski *et al.*  
U.S. Patent No.: 5,594,104  
U.S. Appl. No.: 384,492  
Filed: February 6, 1995  
Priority Data: January 31, 1995 (U.S. Appl. No. 381,266)

A20 Title: "Anti-Obesity Proteins"  
Inventors: Basinski *et al.*  
U.S. Patent No.: 5,605,886  
U.S. Appl. No.: 442,916  
Filed: May 17, 1995  
Priority Data: February 6, 1995 (U.S. Appl. No. 383,648)  
January 31, 1995 (U.S. Appl. No. 381,265)

A23 Title: "Anti-Obesity Proteins"  
Inventors: Basinski *et al.*  
U.S. Patent No.: 5,691,309  
U.S. Appl. No.: 383,650  
Filed: February 6, 1995  
Priority Data: January 31, 1995 (U.S. Appl. No. 381,451)

B1 Title: "Anti-Obesity Proteins"  
Inventors: Basinski *et al.*  
Appl. No.: 96300612.7  
Filed: January 29, 1996  
Publication No.: EP 0 725 078 A1  
Publication Date: August 7, 1996  
Priority Data: January 31, 1995 (U.S. Appl. No. 381,048)  
February 6, 1995 (U.S. Appl. No. 383,638)

B2 Title: "Anti-Obesity Proteins"  
Inventors: Basinski *et al.*  
Appl. No.: 96300613.5  
Filed: January 29, 1996  
Publication No.: EP 0 725 079 A1  
Publication Date: August 7, 1996  
Priority Data: January 31, 1995 (U.S. Appl. No. 381,048)  
February 6, 1995 (U.S. Appl. No. 383,638)  
June 22, 1995 (U.S. Appl. No. 60/000,450)  
August 11, 1995 (U.S. Appl. No. 60/002,161)

B3 Title: "Rat Obese Gene, Its Gene Product and Its Production"  
Inventors: Nakao *et al.*  
Appl. No.: 96105353.5  
Filed: April 3, 1996  
Publication No.: EP 0 736 599 A2  
Publication Date: October 9, 1996  
Priority Data: April 3, 1995 (JP Appl. No. 77966/95)

B5 Title: "Obesity Gene Product"  
Inventors: Hsiung *et al.*  
Appl. No.: 96303478.0  
Filed: May 16, 1996  
Publication No.: EP 0 743 321 A2  
Publication Date: November 20, 1996  
Priority Data: May 19, 1995 (US Appl. No. 445,305)

B6 Title: "Rhesus OB Protein and DNA"  
Inventors: Basinski *et al.*  
Appl. No.: 96303601.7  
Filed: May 21, 1996  
Publication No.: EP 0 744 408 A2  
Publication Date: November 27, 1996  
Priority Data: May 26, 1995 (U.S. Appl. No. 452,228)  
May 26, 1995 (U.S. Appl. No. 451,335)

B15 Title: "Rat Obese Gene, Product and Method of Producing Thereof"  
Inventors: Fujisawa *et al.*  
Appl. No.: 96JP-0079916  
Filed: April 2, 1996  
Publication No.: JP 8-333394  
Publication Date: December 17, 1996  
Priority Data: April 3, 1995 (JP Appl. No. 95JP-0077966)

B20 Title: "Anti-Obesity Proteins"  
Inventors: Basinski *et al.*  
Appl. No.: PCT/US96/00947  
Filed: January 29, 1996  
Publication No.: WO 96/23514  
Publication Date: August 8, 1996  
Priority Data: January 31, 1995 (U.S. Appl. No. 08/381,247)  
January 31, 1995 (U.S. Appl. No. 08/381,451)  
January 31, 1995 (U.S. Appl. No. 08/381,266)  
January 31, 1995 (U.S. Appl. No. 08/381,370)  
January 31, 1995 (U.S. Appl. No. 08/381,047)  
January 31, 1995 (U.S. Appl. No. 08/381,041)  
January 31, 1995 (U.S. Appl. No. 08/381,057)  
January 31, 1995 (U.S. Appl. No. 08/381,050)  
January 31, 1995 (U.S. Appl. No. 08/381,034)  
January 31, 1995 (U.S. Appl. No. 08/381,040)  
January 31, 1995 (U.S. Appl. No. 08/381,163)  
January 31, 1995 (U.S. Appl. No. 08/381,054)

January 31, 1995 (U.S. Appl. No. 08/381,666)  
January 31, 1995 (U.S. Appl. No. 08/381,049)  
January 31, 1995 (U.S. Appl. No. 08/381,037)  
February 6, 1995 (U.S. Appl. No. 08/383,632)  
February 6, 1995 (U.S. Appl. No. 08/384,492)  
February 6, 1995 (U.S. Appl. No. 08/383,649)  
February 6, 1995 (U.S. Appl. No. 08/383,650)

B21 Title: "Anti-obesity Proteins"  
Inventors: Basinski *et al.*  
Appl. No.: PCT/US96/00948  
Filed: January 29, 1996  
Publication No.: WO 96/23515  
Publication Date: August 8, 1996  
Priority Data: January 31, 1995 (U.S. Appl. No. 08/381,048)  
February 6, 1995 (U.S. Appl. No. 08/383,638)

B22 Title: "Anti-obesity Proteins"  
Inventors: Basinski *et al.*  
Appl. No.: PCT/US96/00950  
Filed: January 29, 1996  
Publication No.: WO 96/23516  
Publication Date: August 8, 1996  
Priority Data: January 31, 1995 (U.S. Appl. No. 08/381,265)  
February 6, 1995 (U.S. Appl. No. 08/383,648)  
May 17, 1995 (U.S. Appl. No. 08/442,916)

B23 Title: "Anti-obesity Proteins"  
Inventors: Basinski *et al.*  
Appl. No.: PCT/US96/00952  
Filed: January 29, 1996  
Publication No.: WO 96/23517  
Publication Date: August 8, 1996  
Priority Data: January 31, 1995 (U.S. Appl. No. 08/381,048)  
February 6, 1995 (U.S. Appl. No. 08/383,638)  
June 22, 1995 (U.S. Appl. No. 60/000,450)  
August 11, 1995 (U.S. Appl. No. 60/002,161)

B33 Title: "Biologically Active Peptide Fragments of OB Protein"  
Inventors: Smith *et al.*  
Appl. No.: PCT/GB96/01094  
Filed: May 7, 1996  
Publication No.: WO 96/34885  
Publication Date: November 7, 1996  
Priority Data: May 5, 1995 (GB Appl. No. 9509164.1)

B36 Title: "Obesity Gene Product"  
Inventors: Hsiung *et al.*  
Appl. No.: PCT/US96/07045  
Filed: May 16, 1996  
Publication No.: WO 96/36644  
Publication Date: November 21, 1996  
Priority Data: May 19, 1995 (U.S. Appl. No. 08/445,305)

B37 Title: "Rhesus OB Protein and DNA"  
Inventors: Basinski *et al.*  
Appl. No. PCT/US96/07329  
Filed: May 21, 1996  
Publication No.: WO 96/37517  
Publication Date: November 28, 1996  
Priority Data: May 26, 1995 (U.S. Appl. No. 08/451,335)  
May 26, 1995 (U.S. Appl. No. 08/452,228)

B47 Title: "Polypeptide Fragments Derived From The Obese Gene Product"  
Inventors: Mapelli *et al.*  
Appl. No.: PCT/US96/17365  
Filed: October 28, 1996  
Publication No.: WO 97/16550  
Publication Date: May 9, 1997  
Priority Data: Nov. 2, 1995 (U.S. Appl. No. 60/007,789)

B51 Title: "Mutational Variants Of Mammalian Ob Gene Proteins"  
Inventors: Altmann *et al.*  
Appl. No.: PCT/US96/18561  
Filed: December 3, 1996  
Publication No.: WO 97/20933  
Publication Date: June 12, 1997  
Priority Data: Dec. 6, 1995 (U.S. Appl. No. 08/568,077)

B68 Title: "Fragments of Leptin (OB Protein)"  
Inventors: Al-Barazanji *et al.*  
Appl. No.: PCT/EP97/02968  
Filed: June 4, 1997  
Publication No.: WO 97/46585  
Publication Date: December 11, 1997  
Priority Data: June 6, 1996 (G.B. Appl. No. 9611775.9)  
Sept. 5, 1996 (G.B. Appl. No. 9618540.0)  
Feb. 20, 1997 (G.B. Appl. No. 9703493.8)

B76 Title: "Canine OB Protein Compositions And Methods"  
Inventor: Hernday, N.  
Appl. No.: PCT/US97/03209  
Filed: February 28, 1997  
Publication No.: WO 97/32022  
Publication Date: September 4, 1997  
Priority Data: March 1, 1996 (U.S. Appl. No. 08/609,408)

*B. Thioether Bond*

Documents:

A18 Title: "Anti-obesity Proteins"  
Inventors: Becker *et al.*  
U.S. Patent No.: 5,594,101  
U.S. Appl. No.: 398,021  
Filed: March 3, 1995

B29 Title: "Anti-obesity Proteins"  
Inventors: Becker *et al.*  
Appl. No.: PCT/US96/02932  
Filed: March 1, 1996  
Publication No.: WO 96/27385  
Publication Date: September 12, 1996  
Priority Data: March 3, 1995 (U.S. Appl. No. 08/398,021)

B41 Title: "Obesity Protein Intermediates and Their Preparation and Use"  
Inventors: Hale *et al.*  
Appl. No.: PCT/US96/10613  
Filed: June 20, 1996  
Publication No.: WO 97/00886  
Publication Date: January 9, 1997  
Priority Data: June 22, 1995 (U.S. Appl. No. 60/000,451)

*C. Cross-Linked  
Documents:*

A5 Title: "Anti-obesity Proteins"  
Inventors: Basinski *et al.*  
U.S. Patent No.: 5,552,523  
U.S. Appl. No.: 384,183  
Filed: February 6, 1995  
Priority Data: January 31, 1995 (U.S. Appl. No. 381,458)

A6 Title: "Anti-obesity Proteins"  
Inventors: Basinski *et al.*  
U.S. Patent No.: 5,552,524  
U.S. Appl. No.: 384,292  
Filed: February 6, 1995  
Priority Data: January 31, 1995 (U.S. Appl. No. 381,661)

A7 Title: "Anti-obesity Proteins"  
Inventors: Basinski *et al.*  
U.S. Patent No.: 5,554,727  
U.S. Appl. No.: 383,631  
Filed: February 6, 1995  
Priority Data: January 31, 1995 (U.S. Appl. No. 381,033)

A8 Title: "Anti-obesity Proteins"  
Inventors: Basinski *et al.*  
U.S. Patent No.: 5,559,208  
U.S. Appl. No.: 383,639  
Filed: February 6, 1995  
Priority Data: January 31, 1995 (U.S. Appl. No. 381,031)

B19 Title: "Anti-obesity Proteins"  
Inventors: Basinski *et al.*  
Appl. No.: PCT/US96/00946  
Filed: January 29, 1996  
Publication No.: WO 96/23513  
Publication Date: August 8, 1996  
Priority Data: January 31, 1995 (U.S. Appl. No. 08/381,661)  
February 6, 1995 (U.S. Appl. No. 08/384,292)

B24 Title: "Anti-obesity Proteins"  
Inventors: Basinski *et al.*  
Appl. No.: PCT/US96/01345  
Filed: January 29, 1996  
Publication No.: WO 96/23518  
Publication Date: August 8, 1996  
Priority Data: January 31, 1995 (U.S. Appl. No. 08/381,031)  
February 6, 1995 (U.S. Appl. No. 08/383,639)

B25 Title: "Anti-obesity Proteins"  
Inventors: Basinski *et al.*  
Appl. No.: PCT/US96/01412  
Filed: January 29, 1996  
Publication No.: WO 96/23519  
Publication Date: August 8, 1996  
Priority Data: Jan. 31, 1995 (U.S. Appl. No. 08/381,458)  
Feb. 6, 1995 (U.S. Appl. No. 08/384,183)

B26 Title: "Anti-obesity Proteins"  
Inventors: Basinski *et al.*  
Appl. No.: PCT/US96/01415  
Filed: January 29, 1996  
Publication No.: WO 96/23520  
Publication Date: August 8, 1996  
Priority Data: January 31, 1995 (U.S. Appl. No. 08/381,033)  
February 6, 1995 (U.S. Appl. No. 08/383,631)

*D. Other Modifications*

Documents:

B4 Title: "Recombinant Obese (Ob) Proteins"  
Inventors: Campfield *et al.*  
Appl. No.: 96106408.6  
Filed: April 24, 1996  
Publication No.: EP 0 741 187 A2  
Publication Date: November 6, 1996  
Priority Data: May 5, 1995 (U.S. Appl. No. 435,777)  
June 7, 1995 (U.S. Appl. No. 484,629)

B16 Title: "Recombinant Obese (OB) Protein"  
Inventors: Campfield *et al.*  
Appl. No.: 96JP-0112739  
Filed: May 7, 1996  
Publication No.: JP 9-3098  
Publication Date: January 7, 1997  
Priority Data: June 7, 1995 (Appl. No. 95US-0484629)  
May 5, 1995 (Appl. No. 95US-0435777)

B18 Title: "Appetite Suppression Factor and Related Methods"  
Inventor: Weigle *et al.*  
Appl No.: PCT/US96/01471  
Filed: January 22, 1996  
Publication No.: WO 96/22308  
Publication Date: July 25, 1996  
Priority Data: January 20, 1995 (U.S. Appl. No. 08/377,068)  
April 10, 1995 (U.S. App. No. 08/419,214)  
June 7, 1995 (U.S. Appl. No. 08/486,459)  
June 7, 1995 (U.S. Appl. No. 08/487,111)  
June 7, 1995 (U.S. Appl. No. 08/486,450)  
October 4, 1995 (U.S. Appl. No. 08/540,242)

B40 Title: "Chimeric Leptin Fused to Immunoglobulin Domain and Use"  
Inventors: Browne *et al.*  
Appl No.: PCT/GB96/01388  
Filed: June 11, 1996  
Publication No.: WO 97/00319  
Publication Date: January 3, 1997  
Priority Data: June 13, 1995 (GB Appl. No. 9511935.0)

B52 Title: "Ob Protein Derivatives Having Prolonged Half-Life"  
Inventors: De Sauvage *et al.*  
Appl. No.: PCT/US96/20718  
Filed: December 19, 1996  
Publication No.: WO 97/24440  
Publication Date: July 10, 1997  
Priority date: Dec. 27, 1995 (U.S. Appl. No. 08/579,494)  
June 20, 1996 (U.S. Appl. No. 08/667,184)

B69 Title: "Ob Protein Binding Protein"  
Inventor: Becker, G.W.  
Appl. No.: PCT/US97/09891  
Filed: June 6, 1997  
Publication No.: WO 97/46587  
Publication Date: December 11, 1997  
Priority Data: June 7, 1996 (U.S. Appl. No. 60/019,284)

B77 Title: "Fibulin Pharmaceutical Compositions And Related Methods"  
Inventor: Bennett, L.G.  
Appl. No.: PCT/US97/06280  
Filed: April 3, 1997  
Publication No.: WO 97/38014  
Publication Date: October 16, 1997  
Priority Data: April 4, 1996 (U.S. Appl. No. 08/627,636)

## II. METHODS FOR THE PREPARATION OF ANTI-OBESITY PROTEINS

Documents:

A21 Title: "Process For Preparing Anti-Obesity Protein"  
Inventor: Mackellar, W.C.  
U.S. Patent No.: 5,614,379  
U.S. Appl. No.: 429,362  
Filed: April 26, 1995

B7 Title: "Process For Preparing Anti-Obesity Protein"  
Inventor: Mackellar, W.C.  
Appl. No.: 96302805.5  
Filed: April 22, 1996  
Publication No.: EP 0 745 610 A2  
Publication Date: December 4, 1996  
Priority Data: April 26, 1995 (U.S. Appl. No. 429,362)

B31 Title: "Anti-Obesity Agents"  
Inventors: Beeley *et al.*  
Appl. No.: PCT/US96/04909  
Filed: April 5, 1996  
Publication No.: WO 96/31526  
Publication Date: October 10, 1996  
Priority Data: April 6, 1995 (U.S. Appl. No. 08/419,598)

B32 Title: "Process For Preparing Anti-Obesity Protein"  
Inventor: Mackellar, W.C.  
Appl. No.: PCT/US96/05703  
Filed: April 24, 1996  
Publication No.: WO 96/34111  
Publication Date: October 31, 1996  
Priority Data: April 26, 1995 (U.S. Appl. No. 08/429,362)

### III. OB GENE PRODUCT ANTIBODIES

Documents:

B27 Title: "OB Gene Product Antibodies"  
Inventors: Heath *et al.*  
Appl. No.: PCT/US96/00957  
Filed: January 29, 1996  
Publication No.: WO 96/23815  
Publication Date: August 8, 1996  
Priority Data: January 31, 1995 (U.S. Appl. No. 08/381,264)

### IV. OB DNA-RELATED

#### A. DNA

Documents:

B9 Title: "DNA Encoding Primate Leptins as Medicinal Proteins"  
Inventors: Basinski *et al.*  
Appl. No.: 96306721.0  
Filed: September 16, 1996  
Publication No.: EP 0 764 722 A2  
Publication Date: March 26, 1997  
Priority Data: September 19, 1995 (U.S. Appl. No. 3,935)  
September 19, 1995 (U.S. Appl. No. 3,936)

B28 Title: "Human Obesity Gene"  
Inventors: Basinski *et al.*  
Appl. No.: PCT/US96/01411  
Filed: January 29, 1996  
Publication No.: WO 96/24670  
Publication Date: August 15, 1996  
Priority Data: Feb. 6, 1995 (U.S. Appl. No. 08/384,493)  
May 26, 1995 (U.S. Appl. No. 08/451,250)

B34 Title: "Nucleic Acids For Treating Obesity"  
Inventors: Giese *et al.*  
Appl. No.: PCT/US96/06609  
Filed: May 8, 1996  
Publication No. WO 96/35787  
Publication Date: November 14, 1996  
Priority Data: May 8, 1995 (U.S. Appl. No. 08/437,834)

B39 Title: "Method For The Detection Of Compounds That Modulate The Effects Of The Obese Protein"  
Inventors: Beeley *et al.*  
Appl. No.: PCT/EP96/02291  
Filed: May 28, 1996  
Publication No.: WO 96/38586  
Publication Date: December 5, 1996  
Priority Data: May 30, 1995 (G.B. Appl. No. 9510857.7)  
June 8, 1995 (G.B. Appl. No. 9511602.6)

B43 Title: "DNA Encoding Medicinal Proteins"  
Inventors: Basinski *et al.*  
Appl. No.: PCT/US96/14810  
Filed: September 16, 1996  
Publication No.: WO 97/11192  
Publication Date: March 27, 1997  
Priority Data: Sept. 19, 1995 (U.S. Appl. No. 60/003,935)  
Sept. 19, 1995 (U.S. Appl. No. 60/003,936)

*B. Gene Regulation*

Documents:

A24 Title: "Transcriptional Promoter Of The Murine Obesity Gene"  
Inventors: de la Brousse *et al.*  
U.S. Patent No.: 5,698,389  
Appl. No.: 558,545  
Filed: November 16, 1995

B30 Title: "Modulators Of OB Gene And Screening Methods Therefor"  
Inventors: Briggs *et al.*  
Appl. No.: PCT/US96/03808  
Filed: March 19, 1996  
Publication No.: WO 96/29405  
Publication Date: September 26, 1996  
Priority Data: March 20, 1995 (U.S. Appl. No. 08/408,584)  
April 5, 1995 (U.S. Appl. No. 08/418,096)  
August 2, 1995 (U.S. Appl. No. 08/510,584)  
October 30, 1995 (U.S. Appl. No. 08/558,588)  
Nov. 21, 1995 (U.S. Appl. No. 60/007,390)  
Nov. 30, 1995 (U.S. Appl. No. 60/007,721)  
Dec. 14, 1995 (U.S. Appl. No. 60/008,601)

B49 Title: "The Transcriptional Promoter Of The Obesity Gene"  
Inventors: de la Brousse *et al.*  
Appl. No.: PCT/US96/18474  
Filed: November 18, 1996  
Publication No.: WO 97/18228  
Publication Date: May 22, 1997  
Priority date: Nov. 16, 1995 (U.S. Appl. No. 08/558,545)

## V. METHODS/MEDICAL DIAGNOSIS OR TREATMENT

### A. *Methods for Treatment of Obesity* Documents:

B17 Title: "Compositions And Methods For The Treatment Of Body Weight Disorders, Including Obesity"  
Inventor: Tartaglia, L.  
Appl. No.: PCT/US95/10918  
Filed: August 23, 1995  
Publication No.: WO 96/05861  
Publication Date: February 29, 1996  
Priority Data: August 23, 1994 (U.S. Appl. No. 294,522)  
June 6, 1995 (U.S. Appl. No. 470,868)

B48 Title: "Inhibition Of Fatty Acid Synthase As A Means To Reduce Adipocyte Mass"  
Inventors: Kuhajda *et al.*  
Appl. No.: PCT/US96/17678  
Filed: November 15, 1996  
Publication No.: WO 97/18806  
Publication Date: May 29, 1997  
Priority Data: Nov. 17, 1995 (U.S. Appl. No. 60/006,940)

B 71 Title: "OB Protein Compositions and Method"  
Inventors: Pelleymounter *et al.*  
Appl. No.: PCT/US96/08225  
Filed: May 30, 1996  
Publication No.: WO 96/40912  
Publication Date: December 19, 1996  
Priority Data: June 7, 1995 (U.S. Appl. No. 08/474,833)

B72 Title: "Methods of Reducing Or Maintaining Reduced Levels of Blood Lipids Using OB Protein Compositions"  
Inventors: Pelleymounter *et al.*  
Appl. No.: PCT/US96/12674  
Filed: August 2, 1996  
Publication No.: WO 97/06816  
Publication Date: February 27, 1997  
Priority Data: August 17, 1995 (U.S. Appl. No. 08/516,263)

*B. Methods for Treatment of Diabetes*  
Documents:

B42 Title: "Methods For Treating Diabetes"  
Inventor: Stephens, T.W.  
Appl. No.: PCT/US96/10983  
Filed: June 26, 1996  
Publication No.: WO 97/02004  
Publication Date: January 23, 1997  
Priority Data: June 30, 1995 (U.S. Appl. No. 60/000,718)

*C. Methods for Treatment/Combination Therapy*  
Documents:

B8 Title: "Methods Of Treating Neuropeptide Y-Associated Conditions"  
Inventors: Bue-Valleskey *et al.*  
Appl. No.: 96304723.8  
Filed: June 26, 1996  
Publication No.: EP 0 759 441 A2  
Publication Date: February 26, 1997  
Priority Data:  
June 30, 1995 (U.S. Appl. No. 740)  
October 27, 1995 (U.S. Appl. No. 5910)  
June 30, 1995 (U.S. Appl. No. 752)  
October 27, 1995 (U.S. Appl. No. 5911)

B35 Title: "Susceptibility Gene For Obesity And Type II Diabetes Mellitus"  
Inventors: Shuldiner *et al.*  
Appl. No.: PCT/US96/07218  
Filed: May 17, 1996  
Publication No.: WO 96/36641  
Publication Date: November 21, 1996  
Priority Data: May 19, 1995 (U.S. Appl. No. 08/446,530)

B44 Title: "Liposome Formulations Of  $5\beta$  Steroids"  
Inventors: Rubinfeld *et al.*  
Appl. No.: PCT/US96/15507  
Filed: September 27, 1996  
Publication No.: WO 97/13500  
Publication Date: April 17, 1997  
Priority Data: Oct. 12, 1995 (U.S. Appl. No. 08/542,083)

B46 Title: "Combination Therapy For The Treatment Of Diabetes And Obesity"  
Inventor: Smith, R.G.  
Appl. No.: PCT/US96/17444  
Filed: October 31, 1996  
Publication No.: WO 97/16189  
Publication Date: May 9, 1997  
Priority Data: Nov. 1, 1995 (U.S. Appl. No. 60/007,138)  
Feb. 22, 1996 (G.B. Appl. No. 9603724.7)

*D. Methods for Treatment/Other Documents:*

B38 Title: "Methods For Treating Anorexia"  
Inventor: Beasley, C.M. Jr.  
Appl. No.: PCT/US96/07467  
Filed: May 23, 1996  
Publication No.: WO 96/38152  
Publication Date: December 5, 1996  
Priority Data: June 1, 1995 (U.S. Appl. No. 08/457,249)

B45 Title: "Methods For Restoring Or Enhancing Reproductive Function In Reproductively Impaired Hosts"  
Inventor: Chehab, F.F.  
Appl. No.: PCT/US96/17163  
Filed: October 22, 1996  
Publication No.: WO 97/15322  
Publication Date: May 1, 1997  
Priority Data: Oct. 22, 1995 (U.S. Appl. No. 60/006,106)

B60 Title: "Methods For Using The Obese Gene And Its Gene Product To Stimulate Hematopoietic Development"  
Inventors: Snodgrass *et al.*  
Appl. No.: PCT/US97/00767  
Filed: January 21, 1997  
Publication No.: WO 97/27286  
Publication Date: July 31, 1997  
Priority Data: January 23, 1996 (U.S. Appl. No. 08/589,915)  
March 20, 1996 (U.S. Appl. No. 08/618,957)  
Sept. 13, 1996 (U.S. Appl. No. 08/713,296)

B73 Title: "Methods of Increasing Lean Tissue Mass Using OB Protein Compositions"  
Inventors: Pelleymounter *et al.*  
Appl. No.: PCT/US96/17718  
Filed: November 4, 1996  
Publication No.: WO 97/18833  
Publication Date: May 29, 1997  
Priority Data: Nov. 22, 1995 (U.S. Appl. No. 08/561,732)

## **VI. OBESITY PROTEIN FORMULATIONS**

Documents:

B10 Title: "Obesity Protein Formulations"  
Inventors: Beals *et al*.  
Appl. No.: 97300299.1  
Filed: January 17, 1997  
Publication No.: EP 0 784 979 A2  
Publication Date: July 23, 1997  
Priority Data: February 7, 1996 (GB Appl. No. 9602408)  
January 19, 1996 (U.S. Appl. No. 10229)

B11 Title: Obesity Protein Formulations"  
Inventors: Beals *et al.*  
Appl. No.: 97300300.7  
Filed: January 17, 1997  
Publication No.: EP 0 784 981 A2  
Publication Date: July 23, 1997  
Priority Data: February 7, 1996 (G.B. Appl. No. 9602410)  
January 19, 1996 (U.S. Appl. No. 10357)

B12 Title: Obesity Protein Formulations"  
Inventors: Beals *et al.*  
Appl. No.: 97300302.3  
Filed: January 17, 1997  
Publication No.: EP 0 784 982 A2  
Publication Date: July 23, 1997  
Priority Data: February 7, 1996 (G.B. Appl. No. 9602409)  
January 19, 1996 (U.S. Appl. No. 10257)

B13 Title: "Obesity Protein Formulations"  
Inventors: Beals *et al.*  
Appl. No.: 97300301.5  
Filed: January 17, 1997  
Publication No.: EP 0 786 256 A2  
Publication Date: July 30, 1997  
Priority Data: January 19, 1996 (U.S. Appl. No. 10,244)  
February 7, 1996 (G.B. Appl. No. 9,602,406)

B14 Title: "Formulations of Obesity Protein"  
Inventors: Beals *et al.*  
Appl. No.: 97301995.3  
Filed: March 24, 1997  
Publication No.: EP 0 797 999 A2  
Publication Date: October 1, 1997  
Priority Data: March 26, 1996 (U.S. Appl. No. 14177)  
April 5, 1996 (U.S. Appl. No. 14951)

B54 Title: "Obesity Protein Formulations"  
Inventors: Beals *et al.*  
Appl. No.: PCT/US97/00864  
Filed: January 17, 1997  
Publication No.: WO 97/26004  
Publication Date: July 24, 1997  
Priority Data: January 19, 1996 (U.S. Appl. No. 60/010,229)  
February 7, 1996 (GB Appl. No. 9602408.8)

B55 Title: "Obesity Protein Formulations"  
Inventors: Beals *et al.*  
Appl. No.: PCT/US97/00568  
Filed: January 17, 1997  
Publication No.: WO 97/26011  
Publication Date: July 24, 1997  
Priority Data: Jan. 19, 1996 (U.S. Appl. No. 60/010,257)  
February 7, 1996 (G.B. Appl. No. 9602409.6)

B56 Title: "Obesity Protein Formulations"  
Inventors: Beals *et al.*  
Appl. No.: PCT/US97/00790  
Filed: January 17, 1997  
Publication No.: WO 97/26012  
Publication Date: July 24, 1997  
Priority Data: January 19, 1996 (U.S. Appl. No. 60/010,357)  
February 7, 1996 (G.B. Appl. No. 9602410.4)

B57 Title: "Obesity Protein Formulations"  
Inventors: Beals *et al.*  
Appl. No.: PCT/US97/00900  
Filed: January 17, 1997  
Publication No.: WO 97/26013  
Publication Date: July 24, 1997  
Priority Data: January 19, 1996 (U.S. Appl. No. 60/010,244)  
February 7, 1996 (GB Appl. No. 9602406.2)

B59 Title: "Obesity Protein Analog Compounds and Formulations Thereof"  
Inventors: Hoffman *et al.*  
Appl. No.: PCT/US97/01189  
Filed: January 24, 1997  
Publication No.: WO 97/26916  
Publication Date: July 31, 1997  
Priority Data: Jan. 25, 1996 (U.S. Appl. No. 60/011,055)

B61 Title: "Obesity Protein Compounds and Formulations Thereof"  
Inventor: Hoffman, J.A.  
Appl. No.: PCT/US97/01188  
Filed: January 24, 1997  
Publication No.: WO 97/28824  
Publication Date: August 14, 1997  
Priority Data: Feb. 6, 1996 (U.S. Appl. No. 60/011,238)

B63 Title: "Formulations Of OB Protein"  
Inventors: Beals *et al.*  
Appl. No.: PCT/US97/04914  
Filed: March 24, 1997  
Publication No.: WO 97/35620  
Publication Date: October 2, 1997  
Priority Data: March 26, 1996 (U.S. Appl. No. 60/014,177)  
April 5, 1996 (U.S. Appl. No. 60/014,951)

## VII. RECEPTORS

### A. OB Receptors

Documents:

A22 Title: "HU-B1.219, A Novel Human Hematopoietin Receptor"  
Inventors: Snodgrass *et al.*  
U.S. Patent No.: 5,643,748  
U.S. Appl. No.: 306,231  
Filed: September 14, 1994

B50 Title: "The OB Receptor And Methods Of Diagnosing And Treating Weight"  
Inventors: Tartaglia *et al.*  
Appl. No.: PCT/US96/19128  
Filed: November 27, 1996  
Publication No.: WO 97/19952  
Publication Date: June 5, 1997  
Priority Data: Nov. 27, 1995 (U.S. Appl. No. 08/562,663)  
Dec. 4, 1995 (U.S. Appl. No. 08/566,622)  
Dec. 8, 1995 (U.S. Appl. No. 08/569,485)  
Dec. 11, 1995 (U.S. Appl. No. 08/570,142)  
Dec. 28, 1995 (U.S. Appl. No. 08/583,153)  
Jan. 22, 1996 (U.S. Appl. No. 08/599,455)  
April 26, 1996 (U.S. Appl. No. 08/638,524)  
Sept. 3, 1996 (U.S. Appl. No. 08/708,123)

B58 Title: "Detection of a Leptin Receptor Variant And Methods For Regulating Obesity"  
Inventors: Snodgrass *et al.*  
Appl. No.: PCT/US97/00881  
Filed: January 17, 1997  
Publication No.: WO 97/26523  
Publication Date: July 24, 1997  
Priority Data: January 18, 1996 (U.S. Appl. No. 08/588,526)

B62 Title: "Rat OB Receptors And Nucleotides Encoding Them"  
Inventors: Hess *et al.*  
Appl. No.: PCT/US97/02397  
Filed: February 18, 1997  
Publication No.: WO 97/31015  
Publication Date: August 28, 1997  
Priority Data: Feb. 22, 1996 (U.S. Appl. No. 60/090,405)  
March 22, 1996 (U.S. Appl. No. 60/013,969)  
April 25, 1996 (GB Appl. No. 9608473.6)

B64 Title: "Leptin Assay"  
Inventors: Rosenblum *et al.*  
Appl. No.: PCT/US97/06505  
Filed: April 18, 1997  
Publication No.: WO 97/40380  
Publication Date: October 30, 1997  
Priority Data: April 22, 1996 (U.S. Appl. No. 60/061,051)  
June 6, 1996 (G.B. Appl. No. 9611785.8)  
Nov. 15, 1996 (U.S. Appl. No. 60/031,002)

B65 Title: "OB Protein Receptor Genes And Use Of The Same"  
Inventors: Iida *et al.*  
Appl. No.: (PCT)WOJP9701470 [97WO-J01470]  
Filed: April 24, 1997  
Publication No.: WO 97/41217 A1  
Publication Date: November 6, 1997  
Priority Data: April 30, 1996 (JP Appl. No. JP 96-134422)

B66 Title: "Detection Of The Leptin Receptor In Reproductive Organs And Methods For Regulating Reproductive Biology"  
Inventors: Snodgrass *et al.*  
Appl. No.: PCT/US97/07676  
Filed: April 28, 1997  
Publication No.: WO 97/41263  
Publication Date: November 6, 1997  
Priority Data: April 29, 1996 (U.S. Appl. No. 08/640,389)

B67 Title: "OB Receptor Isoforms And Nucleic Acids Encoding Them"  
Inventors: Caskey *et al.*  
Appl. No.: PCT/US97/07521  
Filed: May 2, 1997  
Publication No.: WO 97/42340  
Publication Date: November 13, 1997  
Priority Data: May 6, 1996 (U.S. Appl. No. 60/016,899)  
May 24, 1996 (G.B. Appl. No. 9610995.4)

B74 Title: "OB Protein Receptor And Related Compositions And Methods"  
Inventors: Chang *et al.*  
Appl. No.: PCT/US97/00128  
Filed: January 2, 1997  
Publication No.: WO 97/25424  
Publication Date: July 17, 1997  
Priority Data: Jan. 4, 1996 (U.S. Appl. No. 08/582,825)  
Dec. 31, 1996 (U.S. Appl. No. 08/774,414)

B75 Title: "OB, The Receptor For Leptin, Nucleic Acids Encoding The Receptor, And Uses Thereof"  
Inventors: Friedman *et al.*  
Appl. No.: PCT/US97/01010  
Filed: January 16, 1997  
Publication No.: WO 97/26335  
Publication Date: July 24, 1997  
Priority Data: Jan. 16, 1996 (U.S. Appl. No. 08/586,594)  
Feb. 14, 1996 (U.S. Appl. No. 08/599,974)



B. Other

Documents:

B53 Title: "WSX Receptor And Ligands"  
Inventors: Bennett *et al.*  
Appl. No.: PCT/US97/00325  
Filed: January 7, 1997  
Publication No.: WO 97/25425  
Publication Date: July 17, 1997  
Priority Data: January 8, 1996 (U.S. Appl. No. 08/585,005)  
June 20, 1996 (U.S. Appl. No. 08/667,197)

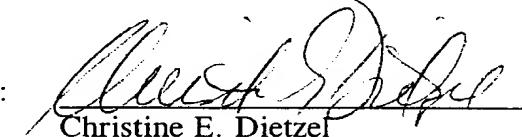
B70 Title: "A Novel Haemopoietin Receptor And Genetic Sequences Encoding Same"  
Inventors: Hilton *et al.*  
Appl. No.: PCT/AU96/00607  
Filed: September 26, 1996  
Publication No.: WO 97/12037  
Publication Date: April 3, 1997  
Priority Data: September 26, 1995 (AU Appl. No. PN 5641)

Documents B15, B16, and B65 are Japanese language patent or patent application documents and as such are being provided with English-language abstracts. Further, document B3 is the European counterpart to document B15, while document B4 is the European counterpart to document B16.

This statement and the accompanying items of information, including a Form PTO-1449, are being submitted after receipt of a first official action on the merits in the above-identified patent application under 37 C.F.R. §1.97(c). Enclosed is a check for the requisite \$240.00 fee under §1.17(p). If it is determined that any additional fee is due, the Commissioner is hereby authorized to charge Deposit Account No. 11-1153.

Respectfully submitted,

By:

  
Christine E. Dietzel  
Agent for Applicants  
Registration No. 37,309

Date: February 24, 1998

Form PTO-1449 (Modified)

U.S. Department of Commerce  
Patent and Trademark OfficeAtty. Docket No.  
**600-1-087CIP1**Serial No.  
**08/438,431****INFORMATION DISCLOSURE STATEMENT**

(Use several sheets if necessary)

MAY 22 2006

Applicant  
**Friedman, J. et al.**Filing Date  
**May 10, 1995**Group  
**1812****U.S. PATENT DOCUMENTS**

*Examiner Initials		Document Number	Issue Date	Name	Class	Subclass	Filing Date If Appropriate
	A1	5,521,283	5/28/96	DiMarchi, R.D. et al.	530	324	
	A2	5,525,705	6/11/96	DiMarchi, R.D. et al.	530	324	
	A3	5,532,336	7/2/96	DiMarchi, R.D. et al.	530	324	
	A4	5,552,522	9/3/96	DiMarchi, R.D. et al.	530	324	
	A5	5,552,523	9/3/96	Basinski, M.B. et al.	530	324	
	A6	5,552,524	9/3/96	Basinski, M.B. et al.	530	324	
	A7	5,554,727	9/10/96	Basinski, M.B. et al.	530	324	
	A8	5,559,208	9/24/96	Basinski, M.B. et al.	530	317	
	A9	5,563,243	10/8/96	DiMarchi, R.D. et al.	530	324	
	A10	5,563,244	10/8/96	DiMarchi, R.D. et al.	530	324	
	A11	5,563,245	10/8/96	DiMarchi, R.D. et al.	530	4	
	A12	5,567,678	10/22/96	DiMarchi, R.D. et al.	530	324	
	A13	5,567,803	10/22/96	Basinski, M.B. et al.	530	324	
	A14	5,569,743	10/29/96	DiMarchi, R.D. et al.	530	324	
	A15	5,569,744	10/29/96	Basinski, M.B. et al.	530	324	
	A16	5,574,133	11/12/96	DiMarchi, R.D. et al.	530	324	
	A17	5,580,954	12/03/96	DiMarchi, R.D. et al.	530	324	
	A18	5,594,101	1/14/97	Becker, G.W. et al.	530	317	
	A19	5,594,104	1/14/97	Basinski, M.B. et al.	530	324	
	A20	5,605,886	2/25/97	Basinski, M.B. et al.	514	12	

EXAMINER  
**G. Draper**

DATE CONSIDERED

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Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. <b>600-1-087CIP1</b>	Serial No. <b>08/438,431</b>
<b>INFORMATION DISCLOSURE STATEMENT</b> <i>(Use several sheets if necessary)</i>		Applicant <b>Friedman, J. et al.</b>	
		Filing Date <b>May 10, 1995</b>	Group <b>1812</b>

### U.S. PATENT DOCUMENTS

*Examiner Initials		Document Number	Issue Date	Name	Class	Subclass	Filing Date If Appropriate
	A21	5,614,379	3/25/97	MacKellar, W.C. <i>et al.</i>	435	69.1	
	A22	5,643,748	7/01/97	Snodgrass, H.R. <i>et al.</i>	435	69.1	
	A23	5,691,309	11/25/97	Basinski, M.B. <i>et al.</i>	514	12	
	A24	5,698,389	12/16/97	de la Brousse	435	4	

EXAMINER <b>G. Draper</b>	DATE CONSIDERED
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(Use several sheets if necessary)		Filing Date <b>May 10, 1995</b>	Group <b>1812</b>

FOREIGN PATENT DOCUMENTS								
*Examiner Initials		Document Number	Publication Date	Country	Class	Subclass	Translation	
							Yes	No
	B1	EP 725079 A1	8/7/96	EP				
	B2	EP 725079 A1	8/7/96	EP				
	B3	EP 736599 A2	10/9/96	EP				
	B4	EP 741187 A2	11/6/96	EP				
	B5	EP 743321 A2	11/20/96	EP				
	B6	EP 744408 A2	11/27/96	EP				
	B7	EP 745610 A2	12/4/96	EP				
	B8	EP 759441 A2	2/26/97	EP				
	B9	EP 764722 A2	3/26/97	EP				
	B10	EP 784979 A2	7/23/97	EP				
	B11	EP 784981 A2	7/23/97	EP				
	B12	EP 784982 A2	7/23/97	EP				
	B13	EP 786256 A2	7/30/97	EP				
	B14	EP 797999 A2	10/1/97	EP				

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<b>INFORMATION DISCLOSURE STATEMENT</b> <i>(Use several sheets if necessary)</i>				Applicant <b>Friedman, J. et al.</b>	
		Filing Date <b>May 10, 1995</b>	Group <b>1812</b>		

FOREIGN PATENT DOCUMENTS								
*Examiner Initials		Document Number	Publication Date	Country	Class	Subclass	Translation	
							Yes	No
	B15	JP 8-333394	12/17/96	JP			<i>ABSTRACT ONLY</i>	
	B16	JP 9-3098	1/7/97	JP			<i>ABSTRACT ONLY</i>	
	B17	WO 96/05861	2/29/96	PCT				
	B18	WO 96/22308	7/25/96	PCT				
	B19	WO 96/23513	8/8/96	PCT				
	B20	WO 96/23514	8/8/96	PCT				
	B21	WO 96/23515	8/8/96	PCT				
	B22	WO 96/23516	8/8/96	PCT				
	B23	WO 96/23517	8/8/96	PCT				
	B24	WO 96/23518	8/8/96	PCT				
	B25	WO 96/23519	8/8/96	PCT				
	B26	WO 96/23520	8/8/96	PCT				

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				Filing Date <b>May 10, 1995</b>	Group <b>1812</b>

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							Yes	No
	B27	WO 96/23815	8/8/96	PCT				
	B28	WO 96/24670	8/15/96	PCT				
	B29	WO 96/27385	9/12/96	PCT				
	B30	WO 96/29405	9/26/96	PCT				
	B31	WO 96/31526	10/10/96	PCT				
	B32	WO 96/34111	10/31/96	PCT				
	B33	WO 96/34885	11/7/96	PCT				
	B34	WO 96/35787	11/14/96	PCT				
	B35	WO 96/36641	11/21/96	PCT				
	B36	WO 96/36644	11/21/96	PCT				
	B37	WO 96/37517	11/28/96	PCT				
	B38	WO 96/38152	12/5/96	PCT				
	B39	WO 96/38586	12/5/96	PCT				
	B40	WO 97/00319	1/3/97	PCT				
	B41	WO 97/00866	1/9/97	PCT				
	B42	WO 97/02004	1/23/97	PCT				
	B43	WO 97/11192	3/27/97	PCT				
	B44	WO 97/13500	4/17/97	PCT				

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				Filing Date <b>May 10, 1995</b>	Group <b>1812</b>

### FOREIGN PATENT DOCUMENTS

*Examiner Initials		Document Number	Publication Date	Country	Class	Subclass	Translation	
							Yes	No
	B45	WO 97/15322	5/1/97	PCT				
	B46	WO 97/16189	5/9/97	PCT				
	B47	WO 97/16550	5/9/97	PCT				
	B48	WO 97/18806	5/29/97	PCT				
	B49	WO 97/18228	5/22/97	PCT				
	B50	WO 97/19952	6/5/97	PCT				
	B51	WO 97/20933	6/12/97	PCT				
	B52	WO 97/24440	7/10/97	PCT				
	B53	WO 97/25425	7/17/97	PCT				
	B54	WO 97/26004	7/24/97	PCT				
	B55	WO 97/26011	7/24/97	PCT				
	B56	WO 97/26012	7/24/97	PCT				
	B57	WO 97/26013	7/24/97	PCT				
	B58	WO 97/26523	7/24/97	PCT				
	B59	WO 97/26916	7/31/97	PCT				
	B60	WO 97/27286	7/31/97	PCT				
	B61	WO 97/28824	8/14/97	PCT				
	B62	WO 97/31015	8/28/97	PCT				
	B63	WO 97/35620	10/2/97	PCT				
	B64	WO 97/40380	10/30/97	PCT				

EXAMINER G. Draper	DATE CONSIDERED
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

Form PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. <b>600-1-087CIP1</b>	Serial No. <b>08/438,431</b>
<b>INFORMATION DISCLOSURE STATEMENT</b> <i>(Use several sheets if necessary)</i>				Applicant <b>Friedman, J. et al.</b>	
				Filing Date <b>May 10, 1995</b>	Group <b>1812</b>

FOREIGN PATENT DOCUMENTS								
*Examiner Initials		Document Number	Publication Date	Country	Class	Subclass	Translation	
							Yes	No
	B65	WO 97/41217	11/6/97	PCT			<i>ABSTRACT ONLY</i>	
	B66	WO 97/41263	11/6/97	PCT				
	B67	WO 97/42340	11/13/97	PCT				
	B68	WO 97/46585	12/11/97	PCT				
	B69	WO 97/46587	12/11/97	PCT				
	B70	WO 97/12037	4/3/97	PCT				
	B71	WO 96/40912	12/19/96	PCT				
	B72	WO 97/06816	2/27/97	PCT				
	B73	WO 97/18833	5/29/97	PCT				
	B74	WO 97/25424	7/17/97	PCT				
	B75	WO 97/26335	7/24/97	PCT				
	B76	WO 97/32022	9/4/97	PCT				
	B77	WO 97/38014	10/16/97	PCT				

EXAMINER <b>G. Draper</b>	DATE CONSIDERED
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT(S): Friedman et al.

SERIAL NO.: 08/438,431

DATE FILED: May 10, 1995

EXAMINER: DRAPER, G.

ART UNIT : 1646

FOR: OB POLYPEPTIDES, MODIFIED FORMS AND  
DERIVATIVES (AS AMENDED)

EXPRESS MAIL NO. EL406396475US

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

**INFORMATION DISCLOSURE STATEMENT**

In accordance with Applicant's and Applicant's representatives' Duty of Disclosure under 37 CFR § 1.56, and pursuant to 37 CFR § 1.97 and MPEP 717.05(b), Applicant submits herewith documentary information for consideration by the Examiner. Information herein cited is only set forth in fulfillment of Applicant's duty of candor in disclosing all information brought to his attention, and is not an admission that it can be used adversely. The publications are listed on the enclosed Form PTO-1449. Applicant requests that the Examiner, upon reviewing the enclosed materials, initial the enclosed form and return a copy thereof in accordance with the instructions on the form.

In accordance with 37 C.F.R. §1.56 and §1.97, the references listed on the attached form PTO-1449 are being brought to the attention of the Examiner for consideration in connection with the examination of the above-identified patent application.

In as much as a copy of References A25 through C118 listed on the attached PTO Form-1449, have been provided to the Examiner, particularly with regard to 08/485,942 (our Reference 600-1-087CIP2F) they are not enclosed herewith. Should the Examiner wish a copy of any or all references, they will be promptly provided upon her request.

**Fee**

Applicants believe no fee is required in filing this Information Disclosure Statement, however, should this be in error, please charge any additional fees, or credit any overpayments, to Klauber & Jackson Deposit Account 11-1153. A duplicate of this paper is being submitted for accounting purposes.

It is respectfully requested that the Examiner make these references of record, and to indicate consideration thereof by returning a copy of the attached form PTO-1449 with initials or other appropriate marks.

Respectfully submitted,

Christine E. Dietzel, Ph.D.  
Agent for Applicant(s)  
Registration No. 37,309

KLAUBER & JACKSON  
411 Hackensack Avenue  
Hackensack, New Jersey 07601  
(201)487-5800

As a courtesy to the Examiner, and for ease of review, Applicants believe that the documents listed on the accompanying Form PTO-1449 may be organized as set forth below (each listing includes: Form PTO-1449 document number, title, inventor(s), patent number and/or application number, filing date, publication date, and where applicable, priority dates). As a further courtesy to the Examiner, the applicants have included, as Appendix A, a copy of the front page of each patent or patent application listed in the IDS and PTO Form-1449.

**I. Proteins/Protein Analogs (Non-Leptin)**

A28	5,359,034	Skelly et al.	Cysteine depleted IL-6 muteins
A32	5,480,981	Goodwin et al.	CD30 ligand
B80	WO 83/04053	[Consensus Interferon]	
B81	WO 89/10932	[G-CSF]	
C57	Kaiser et al., "Amphiphilic Secondary Structure: Design of Peptide Hormones"		
C67	Lerner et al., "Synthetic Vaccines"		

**II. Fusion Proteins**

A25	5,073,627	Curtis et al.	Fusion proteins comprising GM-CSF and IL-3
A26	5,116,964	Capon et al.	Hybrid immunoglobulins
A27	5,225,538	Capon et al.	Lymphocyte homing receptor/immunoglobulin fusion proteins
A29	5,428,130	Capon et al.	Hybrid immunoglobulins
A30	5,447,851	Beutler et al.	DNA encoding a chimeric polypeptide comprising the extracellular domain of TNF receptor fused to IgG, vectors, and host cells
A31	5,455,165	Capon et al.	Expression vector encoding hybrid immunoglobulins
A33	5,514,582	Capon et al.	Recombinant DNA encoding hybrid immunoglobulins
A35	5,670,625	Lyman et al.	Elk ligand fusion proteins
A36	5,714,147	Capon et al.	Hybrid immunoglobulins
A38	5,739,277	Presta et al.	Altered polypeptides with increased half-life
B84	WO 96/03141	[Chimeric TNF receptor/Ig constant domain]	
B85	WO 96/04388	[IL-4 mutant fused to Ig constant domain]	
B88	WO 96/18412	[IL-10/Fc chimeric protein]	

B90 WO 97/24137 [interferon/immunoglobulin Fc hybrid]

C9 "Designing CD4 immunoadhesins for AIDS therapy"

C18 Ellison et al., "The nucleotide sequence of a human immunoglobulin C 1 gene"

C22 Fisher et al., "Treatment of Septic Shock with the Tumor Necrosis Factor Receptor:Fc Fusion Protein"

C24 Ford et al., "Fusion Tails for the Recovery and Purification of Recombinant Proteins"

C36 Harvill et al., An IgG3-IL2 fusion protein activates complement, binds Fc RI, generates LAK activity and shows enhanced binding to the high affinity IL-2R"

C47 Huse et al., "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda"

C48 IBI Flag Biosystem, "High Expression, Detection, and Purification of Recombinant Proteins in E. coli"

C49 IBI Flag Epitope, "A Technical Bulletin for Users of FLAG Technology"

C76 Mini-Symposium on Flag Technology, ASCB 1992, "Purification and Characterization of Cellular Proteins with the Flag Epitope"

C84 Palmiter et al., "Metallothionein-Human GH Fusion Genes Stimulate Growth of Mice"

C103 Van Zee et al., "Protection Against Lethal Escherichia coli Bacteremia in Baboons (Papio anubis) by Pretreatment with a 55-kDa TNF Receptor (CD120a)-Ig Fusion Protein, Ro 45-2081"

C117 Zheng et al., "Administration of Noncytolytic IL-10/Fc in Murine Models of Lipopolysaccharide-Induced Septic Shock and Allogeneic Islet Transplantation"

### **III. Protein Derivatives/Conjugates**

A34 5,574,018 Habberfield et al. Conjugates of vitamin B12 and proteins

B79 EP 0 401 384 [PEG-modified G-CSF]

B82 WO 94/20069 [Dispersions of PEG-G-CSF for pulmonary delivery]

B83 WO 95/21629 [Oral delivery of chemically modified proteins]

B87 WO 96/11953 [N-terminally chemically modified G-CSF and consensus interferon]

B89 WO 96/29989 [anionic phospholipid/protein complex]

### **IV. Antibodies**

C4 Baron et al., "Antibodies against the Chemically Synthesized Genome-Linked Protein of Poliovirus React with Native Virus-Specific Proteins"

C17 Dressman et al., "Antibody to hepatitis B surface antigen after a single inoculation of uncoupled synthetic HbsAg peptides"

C64 Köhler et al., "Derivation of specific antibody-producing tissue culture and tumor lines by cell fusion"

C65 Lerner et al., "Antibodies to Chemically Synthesized Peptides Predicted from DNA Sequences as Probes of Gene Expression"

C66 Lerner et al., "Chemically synthesized peptides predicted from the nucleotide sequence of the hepatitis B virus genome elicit antibodies reactive with the native envelope protein of Dane particles"

#### V. Leptin Proteins/Analogs

A37 5,719,266 DiMarchi et al. Anti-Obesity Proteins March 17, 1995

B78 AU-B-51978/96 Campfield et al. Recombinant Obese (OB) Proteins March 5, 1998

B86 WO 96/05309 Friedman et al. Modulators of body weight, corresponding nucleic acids and diagnostic and therapeutic uses thereof

C1 "Expression and Purification of a Synthetic Human Obese Gene Product"

C27 GenBank Accession No. 603288

C28 GenBank Acession No. 623332

C29 GenBank Accession No. 726297

C30 GenBank Accession No. U18812

C31 GenBank Accession No. U18915

C32 GenBank Accession No. U22421

#### VI. OB Gene/Gene Expression

C12 Coleman et al., "The Influence of Genetic Background on the Expression of the Obese (*Ob*) Gene in the Mouse"

C14 Considine et al., "Ob Gene Expression Is Increased in Adipocytes from Obese Humans"

C25 Frederich et al., "Nutritional Regulation of ob Gene mRNA in White Adipose Tissue"

C35 Hamilton et al., "Increased obese mRNA expression in omental fat cells from massively obese humans"

C38 He et al., "The Mouse *obese* Gene"

C52 Isse et al., "Structural Organization and Chromosomal Assignment of the Human *obese* Gene"

C73 Masuzaki et al., "Molecular cloning of a Rat Obese (ob) Complement DNA - Augmented Gene Expression in Obese-Hyperglycemic Wistar Fatty Rats"

C74 Masuzaki et al., "Adipose Tissue-specific Expression of the *Obese* (ob) Gene in Rats and Its Marked Augmentation in Genetically Obese-hyperglycemic Wistar Fatty Rats"

C77 Mizuno et al., "Elevated Expression of Obese (ob/ob) Gene Product in Adipose Tissue, and Impaired Induction by Insulin of Jun-B mRNA in Liver, in Genetically Obese Yellow Mice"

C78 Moinat et al., "Modulation of *obese* gene expression in rat brown and white adipose tissues"

C80 Murakami et al., "Cloning of Rat *Obese* cDNA and its Expression in Obese Rats"

C81 Nakamura, "Another Obese Gene Function"

C82 Ogawa et al., "Region-Specificities of the Obese (ob) Gene Expression in Adipose Tissue in Mice and Altered Gene Expression in C57BL/6J ob/ob Mice"

C89 Reddy et al., "Equivalent Levels of OB Gene Expression in Adipose Tissues of Morbidly Obese and Lean Patients"

C93 Shigemoto et al., "Tissue Distribution of the Obese (ob) Gene Expression in Mice and Augmented Gene Expression in the ob/ob Mice"

C96 Stirling et al., "Identification of Microsatellite Markers Near the Human ob Gene and Linkage Studies in NIDDM-Affected Sib Pairs"

C104 Vydelingum et al., "Overexpression of the Obese Gene in the Genetically Obese JCR:LA-Corpulent Rat"

C116 Zhang et al., "Down-regulation of the Expression of the *Obese* Gene by an Antidiabetic Thiazolidinedione in Zucker Diabetic Fatty Rats and *db/db* Mice"

## VII. Leptin/Methods of Treatment

A39 5,756,461 Stephens Methods for treating diabetes

A40 5,827,734 Weigle et al. Materials and methods for determining ob protein in a biological sample

C2 Angier, "Researchers Link Obesity in Humans to Flaw in a Gene"

C3 Barinaga, "'Obese' Protein Slims Mice"

C6 Bishop, "Newfound Gene May Control Fat Storage"

C7      Bishop, "Rockefeller Study Supports Theory That Body Has Fat-Maintenance System"

C15     Cusin et al., "The *ob* Gene and Insulin A Relationship Leading to Clues to the Understanding of Obesity"

C16     Detjen, "Obesity gene find may help millions someday,"

C21     Ferré, Obésité. Produit de Gène ob Et Contrôle De La Masse Adipeuse"

C23     Flam, "Obesity Gene Discovery May Help solve Weighty Problem"

C26     Frederich et al., "Leptin levels reflect body lipid content in mice: Evidence for diet-induced resistance to leptin action"

C37     Hawkes, "Obesity of Mice and Men"

C39     Helm, "Gene Found That May Lead To Obesity"

C41     Highfield, "Scientists find cause of fat mice and men Gene discovery from overweight rodents may help to produce drugs for people with a hereditary risk of obesity"

C44     Hodgson, " 'Obesity' Where Less is More"

C68     Levin et al., "Decreased food intake does not completely account for adiposity reduction after ob protein infusion"

C69     LindPaintner, "Clinical Implications of Basic Research: Finding an Obesity Gene-A Tale of Mice and Man"

C70     Marx, "Obesity Gene Discovery May Help Solve Weighty Problem" (1995)

C71     Marx, "Obesity Gene Discovery May Help Solve Weighty Problem" (December, 1994)

C75     McGarry, "Does leptin lighten the problem of obesity?"

C83     Olefsky, "Weighing in on the Lean Genes"

C90     Rink, "In Search of a Satiety Factor"

C91     Schwartz et al., "Specificity of Leptin Action on Elevated Blood Glucose Levels and Hypothalamic Neuropeptide Y Gene Expression in *ob/ob* Mice"

C95     Stephens et al., "The Role of Neuropeptide Y in the Antiobesity Action of the *Obese* Gene Product"

C106    Watson, "What really plumps you up"

C108    Weigle et al., "Recombinant *ob* Protein Reduces Feeding and Body Weight in the *ob/ob* Mouse"

## VIII. Leptin Receptor

C5      Bennett et al., "A role for leptin and its cognate receptor in hematopoiesis"

C10 Chen, "Evidence That the Diabetes Gene Encodes the Leptin Receptor: Identification of a Mutation in the Leptin Receptor Gene in db/db Mice"

C11 Cioffi et al., "Novel B219/OB receptor isoforms: Possible role of leptin in hematopoiesis and reproduction"

C50 Iida et al., "Substitution at Codon 269 (Glutamine-Proline) of the Leptin Receptor (OB-R) cDNA Is the Only Mutation Found in the Zucker Fatty (*fa/fa*) Rat"

C100 Tartaglia et al., "Identification and Expression Cloning of a Leptin Receptor, OB-R"

#### **IX. Obesity Treatments (general)**

C8 Campfield, "Strategies and Potential Molecular Targets for Obesity Treatment"

C13 Comuzzie et al., "The Search for Human Obesity Genes"

C19 Enerbäck et al., "Mice lacking mitochondrial uncoupling protein are cold-sensitive but not obese"

C20 Evans et al., "Relationship of Body Fat Topography to Insulin Sensitivity and Metabolic Profiles in Premenopausal Women"

C33 Grundy & Barnett, "Metabolic and Health Complications of Obesity"

C34 Gura, "Uncoupling Proteins Provide New Clue to Obesity's Causes"

C42 Hill et al., "Environmental Contributions to the Obesity Epidemic"

C43 Hirsch, "Some heat but not enough light"

C45 Hulsey et al., "An Anorectic Agent From Adipose Tissue of Overfed Rats: Effects of Feeding Behavior"

C46 Hummel et al., "Diabetes, a New Mutation in the Mouse"

C54 Jeanrenaud, "An hypothesis on the aetiology of obesity: dysfunction of the central nervous system as a primary cause"

C55 Jeanrenaud, "Central Nervous System and Peripheral Abnormalities: Clues to the Understanding of Obesity and NIDDM"

C56 Jeanrenaud, "Neuroendocrine and Metabolic Basis of Type II diabetes as Studied in Animal Models"

C59 Kiberstis et al., "Regulation of Body Weight"

C60 Kisseebah et al., "Health Risks of Obesity"

C61 Kisseebah et al., "Regional Adiposity & Morbidity"

C85 Peiris et al., "Glucose Metabolism in Obesity: Influence of Body Fat Distribution"

C86 Peiris et al., "Relationship of Body Fat Distribution to the Metabolic Clearance of Insulin in Premenopausal Women"

C87 Peiris et al., "Splanchnic Insulin Metabolism in Obesity Influence of body Fat Distribution"

C101 Taubes, "As Obesity Rates Rise, Experts Struggle to Explain Why"

C102 Thomas et al., "Thermoregulatory and metabolic phenotypes of mice lacking noradrenaline and adrenaline"

C105 Walsh et al., "Eating Disorders: Progress and Problems"

C107 Weigle et al., "Appetite and the regulation of body composition"

C109 West et al., "Genetics of Dietary Obesity in AKR/J X SWR/J Mice - Segregation of the Trait and Identification of a Linked Locus on Chromosome-4"

C110 Wickelgren, "Obesity: How Big a Problem?"

C112 Wilson et al., "Identification of an overfeeding-induced adipocyte 5kb mRNA Lacking Sequence Homology to Known Adipocyte Genes"

C113 Woods et al., "Signals That Regulate Food Intake and Energy Homeostasis"

C114 Yamakawa et al., "Augmented Production of Tumor Necrosis Factor- $\alpha$  in Obese Mice"

C115 Zarjevski et al., "Chronic Intracerebroventricular Neuropeptide-Y Administration to Normal Rats Mimics Hormonal and Metabolic Changes of Obesity"

C118 Zucker et al., "Fatty, A New Mutation in the Rat"

#### X. Diabetes Treatments (general)

C40 Henry, "Effects of Weight Loss on Mechanisms of Hyperglycemia in Obese Non-Insulin-Dependent Diabetes Mellitus"

C51 Ikeda et al., "Effects of Pioglitazone on Glucose and Lipid Metabolism in Normal and Insulin Resistant Animals"

C53 Iwanishi et al., "Effect of Pioglitazone on Insulin Receptors of Skeletal Muscles From High-Fat-Fed Rats"

C58 Kallen et al., "Antidiabetic thiazolidinediones inhibit leptin (*ob*) gene expression in 3T3-L1 adipocytes"

C62 Kletzien et al., "Adipocyte Fatty Acid-Binding Protein: Regulation of Gene Expression *In Vivo* and *In Vitro* by an Insulin-Sensitizing Agent"

C63 Kobayashi et al., "Pioglitazone Increases Insulin Sensitivity by Activating Insulin Receptor Kinase"

C72 Masuda et al., "Effects of Troglitazone (CS-045) on insulin secretion in isolated rat pancreatic islets and HIT cells: an insulinotropic mechanism distinct from glibenclamide"

C79 Murakami et al., "Amelioration of insulin resistance in genetically obese rodents by M16209, a new antidiabetic agent"

C88 Polonsky et al., "Use of Biosynthetic Human C-peptide in the Measurement of Insulin Secretion Rates in Normal Volunteers and Type I Diabetic Patients"

C92 Shafir, "Animal Models of Non-Insulin-Dependent Diabetes"

C94 Sohda et al., "Studies on Antidiabetic Agents. XII. 1) Synthesis and Activity of the Metabolites of (+/-)-5-[p-[2-(5-Ethyl-2-pyridyl)ethoxy]benzyl]-2-4-thiazolidinedione (Pioglitazone)"

C97 Sugiyama et al., "Effects of Pioglitazone on Glucose and Lipid Metabolism in Wistar Fatty Rats"

C98 Sugiyama et al., Effects of Pioglitazone on Hepatic and Peripheral Insulin Resistance in Wistar Fatty Rats"

C99 Swanson et al., Antidiabetic Agent Pioglitazone Increases Insulin Receptors on 3T3-L1 Adipocytes"

C111 Willson et al., "The Structure-Activity Relationship between Peroxisome Proliferator-Activated Receptor Agonism and the Antihyperglycemic Activity of Thiazolidinediones"

Form PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. 600-1-087CIP1	Serial No. 08/438,431
<b>INFORMATION DISCLOSURE STATEMENT</b> <i>(Use several sheets if necessary)</i>				Applicant Jeffrey Friedman et al.	
		Filing Date May 10, 1995	Group 1646		



**U.S. PATENT DOCUMENTS**

*Examiner Initials		Document Number	Issue Date	Name	Class	Subclass	Filing Date If Appropriate
	A25	5,073,627	12/17/91	Curtis <i>et al.</i>	530	351	
	A26	5,116,964	05/26/92	Capon <i>et al.</i>	536	27	
	A27	5,225,538	07/06/93	Capon <i>et al.</i>	530	387.3	
	A28	5,359,034	10/25/94	Skelly <i>et al.</i>	530	351	
	A29	5,428,130	06/27/95	Capon <i>et al.</i>	530	350	
	A30	5,447,851	09/05/95	Beutler <i>et al.</i>	435	69.7	
	A31	5,455,165	10/03/95	Capon <i>et al.</i>	435	64.7	
	A32	5,480,981	01/02/96	Goodwin <i>et al.</i>	536	23.5	
	A33	5,514,582	05/07/96	Capon <i>et al.</i>	435	252.3	
	A34	5,574,018	11/12/96	Habberfield <i>et al.</i>	514	21	
	A35	5,670,625	09/23/97	Lyman <i>et al.</i>	530	387.3	
	A36	5,714,147	02/03/98	Capon <i>et al.</i>	424	178.1	
	A37	5,719,266	02/17/98	DiMarchi <i>et al.</i>	530	350	
	A38	5,739,277	4/14/98	Presta <i>et al.</i>	530	326	
	A39	5,756,461	05/26/98	Stephens, T.W.	514	12	
	A40	5,827,734	10/27/98	Weigle <i>et al.</i>	435	325	

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FOREIGN PATENT DOCUMENTS							
*Examiner Initials		Document Number	Publication Date	Country	Class	Subclass	Translation
							Yes      No
	B78	AU-B-51978/96	03/05/98	AU			✓
	B79	EP 0 401 384	12/12/90	EP			
	B80	WO 83/04053	11/24/83	WIPO			
	B81	WO 89/10932	11/16/89	WIPO			
	B82	WO 94/20069	09/15/94	WIPO			
	B83	WO 95/21629	08/17/95	WIPO			
	B84	WO 96/03141	02/08/96	WIPO			
	B85	WO 96/04388	02/15/96	WIPO			
	B86	WO 96/05309	02/22/96	WIPO			
	B87	WO 96/11953	04/25/96	WIPO			
	B88	WO 96/18412	06/20/96	WIPO			
	B89	WO 96/29989	10/03/96	WIPO			
	B90	WO 97/24137	07/10/97	WIPO			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)		
	C1	Altman, S. W. et al., "Expression and Purification of a Synthetic Human Obese Gene Product," <i>Protein Expression and Purification</i> , 6:722-726 (1995).
	C2	Angier, N., "Researchers Link Obesity In Humans To Flaw In A Gene," <i>The New York Times</i> reported on December 1, 1994.

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)			
C3	Barinaga, " 'Obese' Protein Slims Mice", <i>Science</i> , 269:475-476 (July, 1995).		
C4	Baron, M.H. et al., "Antibodies against the Chemically Synthesized Genome-Linked Protein of Poliovirus React with Native Virus-Specific Proteins," <i>Cell</i> , 28:395-404 (February, 1982).		
C5	Bennett, B.D. et al., "A role for leptin and its cognate receptor in hematopoiesis," <i>Current Biology</i> , 6(9):1170-1180 (September 1, 1996).		
C8	Bishop, J.E., "Newfound Gene May Control Fat Storage," <i>The Wall Street Journal, Health and Science</i> , reported on December 1, 1994.		
C7	Bishop, J.E., "Rockefeller Study Supports Theory That Body Has Fat-Maintenance System," <i>Wall Street Journal</i> , reported on March 9, 1995.		
C8	Campfield, L.A. et al., "Strategies and Potential Molecular Targets for Obesity Treatment," <i>Science</i> , 280:1383-1387 (May, 1998).		
C8	Capon, D.J. et al., "Designing CD4 immunoadhesins for AIDS therapy," <i>Nature</i> , 337:525-531 (February, 1989).		
C10	Chen, H. et al., "Evidence That the Diabetes Gene Encodes the Leptin Receptor: Identification of a Mutation in the Leptin Receptor Gene in <i>db/db</i> Mice," <i>Cell</i> , 84:491-495 (February, 1996).		
C11	Cioffi, J.A. et al., "Novel B219/OB receptor isoforms: Possible role of leptin in hematopoiesis and reproduction," <i>Nature Medicine</i> , 2(5):585-589 (May, 1996).		
C12	Coleman, D.L. et al., "The Influence of Genetic Background on the Expression of the Obese ( <i>Ob</i> ) Gene in the Mouse," <i>Diabetologia</i> , 9:287-293 (1973).		
C13	Comuzzie, A.G. et al., "The Search for Human Obesity Genes," <i>Science</i> , 280:1374-1377 (May, 1998).		
C14	Considine, R.V. et al., "Ob Gene Expression Is Increased in Adipocytes from Obese Humans," <i>Diabetes</i> , 44:202A (May, 1995) (ABSTRACT 739).		
C15	Cusin I. et al., "The <i>ob</i> Gene and Insulin A Relationship Leading to Clues to the Understanding of Obesity," <i>Diabetes</i> , 44:1467-1470 (December, 1995).		

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<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)		
C16	Detjen, J. (Philadelphia Inquirer), "Obesity gene find may help millions someday," The Durham Herald Co., <i>The Herald-Sun</i> (Durham, NC), pg. A1, reported on December 1, 1994.	
C17	Dressman, G.R. et al., "Antibody to hepatitis B surface antigen after a single inoculation of uncoupled synthetic HbsAg peptides," <i>Nature</i> , 295:158-160 (January, 1982).	
C18	Ellison, J.W. et al., "The nucleotide sequence of a human immunoglobulin C $\gamma$ <sub>1</sub> gene," <i>Nucleic Acids Research</i> , 10(13):4071-4079 (1982).	
C19	Enerbäck, S. et al., "Mice lacking mitochondrial uncoupling protein are cold-sensitive but not obese," <i>Nature</i> , 387:90-93 (May, 1997).	
C20	Evans, D.J. et al., "Relationship of Body Fat Topography to Insulin Sensitivity and Metabolic Profiles in Premenopausal Women," <i>Metabolism</i> , 33(1):68-75 (January, 1984).	
C21	Ferré, P, "Obésité. Produit de Gène ob Et Contrôle De La Masse Adipeuse [Obesity, The ob Gene Product and Control of Adipose Mass]," <i>Diabète &amp; Métabolisme (Paris)</i> , 21:217-218 (1995).	
C22	Fisher, C.J. et al., "Treatment of Septic Shock with the Tumor Necrosis Factor Receptor:Fc Fusion Protein," <i>N. Engl. J. Med.</i> , 334:1697-1702 (1996).	
C23	Flam, "Obesity Gene Discovery May Help Solve Weighty Problem," <i>Science</i> , 266:1477-1478 (December, 1994).	
C24	Ford, C.F. et al., "Fusion Tails for the Recovery and Purification of Recombinant Proteins," <i>Protein Expression and Purification</i> , 2:95-107 (1991).	
C25	Frederich, R. et al., "Nutritional Regulation of ob Gene mRNA in White Adipose Tissue," <i>The Endocrine Society, Programs &amp; Abstracts</i> , 77th Meeting, June 14-17, 1995, Washington, D.C., p.173 (ABSTRACT OR25-3)	
C26	Frederich R.C. et al., "Leptin levels reflect body lipid content in mice: Evidence for diet-induced resistance to leptin action," <i>Nature Medicine</i> , 1(12):1311-1314 (December, 1995).	

EXAMINER	DATE CONSIDERED
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<b>INFORMATION DISCLOSURE STATEMENT</b> <i>(Use several sheets if necessary)</i>		Applicant Jeffrey Friedman et al.		
		Filing Date May 10, 1995	Group 1646	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)			
C27	GenBank Accession No. 603288, ob, Deposited by Zhang et al., March 30, 1995.		
C28	GenBank Accession No. 623332, ob, Deposited by Zhang et al., January 13, 1995.		
C29	GenBank Accession No. 726297, obesity protein, Deposited by Chehab et al., March 21, 1995.		
C30	GenBank Accession No. U18812, <i>Mus musculus</i> obese precursor (ob) mRNA, complete cds., deposited by Zhang, Y. et al., March 30, 1995.		
C31	GenBank Accession No. U18915, Human obese (ob) mRNA, complete cds., deposited by Zhang, Y. et al., January 13, 1995.		
C32	GenBank Accession No. U22421, <i>Mus musculus</i> obesity protein (ob) gene, complete cds., Deposited by Chehab et al., March 23, 1995.		
C33	Grundy and Barnett, "Metabolic and Health Complications of Obesity," <i>Disease- a-Month (DM)</i> , 36:645-696 (December, 1990)		
C34	Gura, T., "Uncoupling Proteins Provide New Clue to Obesity's Causes," <i>Science</i> , 280:1369-1370 (May, 1998).		
C35	Hamilton, B.S. et al., "Increased obese mRNA expression in omental fat cells from massively obese humans," <i>Nature Medicine</i> , 1(9):953-956 (September, 1995).		
C36	Harvill, E.T. et al., "An IgG3-IL2 fusion protein activates complement, binds Fc $\gamma$ RI, generates LAK activity and shows enhanced binding to the high affinity IL-2R," <i>Immunotechnology</i> , 1:95-105 (1995).		
C37	Hawkes, N. "Obesity of Mice and Men," Times Newspaper Limited, <i>The Times</i> , reported on December 5, 1994.		
C38	He, Y. et al., "The Mouse <i>obese</i> Gene," <i>Journal of Biological Chemistry</i> , 270(48):28887-28891 (December, 1995).		
C39	Helm, L. (Times Staff Writer), "Gene Found That May Lead To Obesity," <i>The Times Mirror Company, Los Angeles Times, part A, page 1, col. 3</i> (December 1, 1994).		

EXAMINER	DATE CONSIDERED
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		Filing Date May 10, 1995	Group 1646

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)		
C40	Henry R.R. <i>et al.</i> , "Effects of Weight Loss on Mechanisms of Hyperglycemia in Obese Non-Insulin-Dependent Diabetes Mellitus," <i>Diabetes</i> , 35:990-998 (September, 1986).	
C41	Highfield, R. (Science Editor), "Scientists find cause of fat mice and men Gene discovery from overweight rodents may help to produce drugs for people with a hereditary risk of obesity," <i>Telegraph Group Limited, The Daily Telegraph</i> , pg. 7 (December 1, 1994).	
C42	Hill, J.O. <i>et al.</i> , "Environmental Contributions to the Obesity Epidemic," <i>Science</i> , 280:1371-1374 (May, 1998).	
C43	Hirsch, J., "Some heat but not enough light," <i>Nature</i> , 387:27-28 (May, 1997).	
C44	Hodgson, " 'Obesity' Where Less is More," <i>Bio/Technology</i> , 13:1060-1063 (October, 1995).	
C45	Hulsey, M.G. <i>et al.</i> , "An Anorectic Agent From Adipose Tissue of Overfed Rats: Effects of Feeding Behavior," <i>Physiol. &amp; Behav.</i> , 52:1141-1149 (1992).	
C46	Hummel, K.P. <i>et al.</i> , "Diabetes, a New Mutation in the Mouse," <i>Science</i> , 153:1127-1128 (1966)	
C47	Huse, W.D. <i>et al.</i> , "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda," <i>Science</i> , 246:1275-1281 (December, 1989).	
C48	IBI FLAG BIOSYSTEM, "High Yield Expression, Detection, and Purification of Recombinant Proteins in <i>E. coli</i> ," Integrated Sciences Pty Ltd, Sydney, Australia	
C49	IBI FLAG Epitope, A Technical Bulletin for Users of FLAG Technology, International Biotechnologies Inc., FLAG Product Development Group, IBI, A Kodak Company, New Haven, CT, Volume 1, Number 1, pp. 1-24 (September, 1992).	
C50	Iida, M. <i>et al.</i> , "Substitution at Codon 269 (Glutamine→Proline) of the Leptin Receptor (OB-R) cDNA Is the Only Mutation Found in the Zucker Fatty ( <i>fa/fa</i> ) Rat," <i>Biochemical and Biophysical Research Communications</i> , 224:597-604 (July 16, 1996).	

EXAMINER	DATE CONSIDERED
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		Filing Date May 10, 1995	Group 1646

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)			
C51	Ikeda, H. <i>et al.</i> , "Effects of Pioglitazone on Glucose and Lipid Metabolism in Normal and Insulin Resistant Animals," <i>Arzneim.-Forsch./Drug Res.</i> , 40 (l), Nr. 2:156-162 (1990).		
C52	Isse N. <i>et al.</i> , "Structural Organization and Chromosomal Assignment of the Human obese Gene," <i>J. Biological Chemistry</i> , 270(46):27728-27733 (November, 1995).		
C53	Iwanishi, M. <i>et al.</i> , "Effect of Pioglitazone on Insulin Receptors of Skeletal Muscles From High-Fat-Fed Rats," <i>Metabolism</i> , 42(8):1017-1021 (August, 1993).		
C54	Jeanrenaud, B., "An hypothesis on the aetiology of obesity: dysfunction of the central nervous system as a primary cause," <i>Diabetologia</i> , 28:502-513 (1985).		
C55	Jeanrenaud, B., "Central Nervous System and Peripheral Abnormalities: Clues to the Understanding of Obesity and NIDDM," <i>Diabetologia</i> , 37(Suppl. 2):S169-S178 (1994).		
C56	Jeanrenaud, B. "Neuroendocrine and Metabolic Basis of Type II Diabetes as Studied in Animal Models," <i>Diabetes/Metabolism Reviews</i> , 4(6):603-614 (1988).		
C54	Kaiser, E.T. <i>et al.</i> , "Amphiphilic Secondary Structure: Design of Peptide Hormones," <i>Science</i> , 223:249-255 (January, 1984).		
C58	Kallen, C.B. <i>et al.</i> , "Antidiabetic thiazolidinediones inhibit leptin ( <i>ob</i> ) gene expression in 3T3-L1 adipocytes," <i>Proc. Natl. Acad. Sci.</i> , 93:5793-5796 (June, 1996).		
C59	Kiberstis, P.A. <i>et al.</i> , "Regulation of Body Weight," <i>Science</i> , 280:1363 (May, 1998).		
C60	Kissebah, A.H. <i>et al.</i> , "Health Risks of Obesity," <i>Medical Clinical North America</i> , 73(1):111-138 (January, 1989).		
C61	Kissebah, A.H. <i>et al.</i> , "Regional Adiposity & Morbidity" in <i>Physiological Reviews: Body Fat Distribution &amp; Morbidity</i> , 74(4):761-811 (October, 1994).		
C62	Kletzien, R.F. <i>et al.</i> , "Adipocyte Fatty Acid-Binding Protein: Regulation of Gene Expression <i>In Vivo</i> and <i>In Vitro</i> by an Insulin-Sensitizing Agent," <i>Molecular Pharmacology</i> , 42:558-562 (1992).		
C63	Kobayashi, M. <i>et al.</i> , "Pioglitazone Increases Insulin Sensitivity by Activating Insulin Receptor Kinase," <i>Diabetes</i> , 41:476-483 (April, 1992).		

EXAMINER	DATE CONSIDERED
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)		
C64	Köhler, G. <i>et al.</i> , "Derivation of specific antibody-producing tissue culture and tumor lines by cell fusion," <i>Eur. J. Immunol.</i> , 6:511-519 (1976).	
C65	Lerner, R.A. <i>et al.</i> , "Antibodies to Chemically Synthesized Peptides Predicted from DNA Sequences as Probes of Gene Expression," <i>Cell</i> , 23:309-310 (February, 1981).	
C66	Lerner, R.A. <i>et al.</i> , "Chemically synthesized peptides predicted from the nucleotide sequence of the hepatitis B virus genome elicit antibodies reactive with the native envelope protein of Dane particles," <i>Proc. Natl. Acad. Sci., USA</i> , 78(6):3403-3407 (June, 1981).	
C67	Lerner, R.A., "Synthetic Vaccines," <i>Scientific American</i> , 248:66-74 (1983).	
C68	Levin, N. <i>et al.</i> , "Decreased food intake does not completely account for adiposity reduction after ob protein infusion," <i>Proc. Natl. Acad. Sci.</i> , 93:1726-1730 (February, 1996).	
C69	LindPaintner, K., "Clinical Implications of Basic Research: Finding an Obesity Gene-A Tale of Mice and Man," <i>New England Journal of Medicine</i> , 332(10):679-680 (March, 1995).	
C70	Marx, J., "Obesity Gene Discovery May Help Solve Weighty Problem," <i>Surg. Neurol.</i> , 43:351-352 (1995).	
C71	Marx, J., "Obesity Gene Discovery May Help Solve Weighty Problem," <i>Science</i> , 266:1477-1478 (December, 1994).	
C72	Masuda, K. <i>et al.</i> , "Effects of Troglitazone (CS-045) on insulin secretion in isolated rat pancreatic islets and HIT cells: an insulinotropic mechanism distinct from glibenclamide," <i>Diabetologia</i> , 38:24-30 (1995).	
C73	Masuzaki et al., "Molecular Cloning of a Rat Obese (ob) Complement DNA - Augmented Gene Expression in Obese-Hyperglycemic Wistar Fatty Rats," The Endocrine Society, Programs & Abstracts, 77th Annual Meeting, June 14-17, 1995, Washington, D.C., p.175 (ABSTRACT P1-250)	

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		Filing Date May 10, 1995	Group 1646

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)			
C74	Masuzaki, H. et al., "Adipose Tissue-specific Expression of the <i>Obese</i> (ob) Gene in Rats and Its Marked Augmentation in Genetically Obese-hyperglycemic Wistar Fatty Rats," <i>Proceedings of the Japan Academy Series B Physical and Biological Sciences</i> , 71(5):148-152 (1995).		
C75	McGarry, J.D., "Does leptin lighten the problem of obesity?" <i>Current Biology</i> , 5(12):1342-1344 (1995).		
C76	Mini-Symposium on Flag Technology, ASCB 1992, "Purification and Characterization of Cellular Proteins with the Flag Epitope," Colorado Convention Center, Denver, Colorado, 8 pages (November 18, 1992)		
C77	Mizuno, T. et al., "Elevated Expression of Obese (ob/ob) Gene Product in Adipose Tissue, and Impaired Induction by Insulin of Jun-B mRNA in Liver, in Genetically Obese Yellow Mice," The Endocrine Society, Programs & Abstracts, 77th Annual Meeting, June 14-17, 1995, Washington, D.C., p.174 (ABSTRACT P1-248)		
C78	Moinat, M. et al., "Modulation of <i>obese</i> gene expression in rat brown and white adipose tissues," <i>FEBS Letters</i> , 373:131-134 (1995).		
C79	Murakami, N. et al., "Amelioration of insulin resistance in genetically obese rodents by M16209, a new antidiabetic agent," <i>European Journal of Pharmacology</i> , 304:129-134 (1996).		
C80	Murakami, T. et al., "Cloning of Rat <i>Obese</i> cDNA and its Expression in Obese Rats," <i>Biochemical and Biophysical Research Communications</i> , 209(3):944-952 (April, 1995).		
C81	Nakamura, M.T. , "Another Obese Gene Function," <i>Nature</i> , 374:124 (March, 1995)		
C82	Ogawa, et al., "Region-Specificities of the Obese (ob) Gene Expression in Adipose Tissue in Mice and Altered Gene Expression in C57BL/6J ob/ob Mice," <i>The Endocrine Society</i> , Programs and Abstracts, 77th Annual Meeting, June 14-17, 1995, Washington, D.C., p.175 (ABSTRACT P1-249).		
C83	Olefsky, J.M., "Weighing in on the Lean Genes," <i>Journal of Clinical Investigations</i> , 95:2427-2428 (June, 1995).		
C84	Palmeter, R.D. et al., "Metallothionein-Human GH Fusion Genes Stimulate Growth of Mice," <i>Science</i> , 222:809-814 (November, 1983).		

EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance <u>and</u> not considered. Include copy of this form with next communication to applicant.	

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)		
C85	Peiris, A.N. et al., "Glucose Metabolism in Obesity: Influence of Body Fat Distribution," <i>J. Clinical Endocrinology Metabolism</i> , 67(4):760-767 (1988).	
C86	Peiris, A.N. et al., "Relationship of Body Fat Distribution to the Metabolic Clearance of Insulin in Premenopausal Women," <i>International J. Obesity</i> , 11:581-589 (1987).	
C87	Peiris, A.N. et al., "Splanchnic Insulin Metabolism in Obesity Influence of Body Fat Distribution," <i>J. Clin. Invest.</i> , 78:1648-1657 (December, 1986).	
C88	Polonsky, K.S. et al., "Use of Biosynthetic Human C-peptide in the Measurement of Insulin Secretion Rates in Normal Volunteers and Type I Diabetic Patients," <i>J. Clin. Invest.</i> , 77:98-105 (January, 1986).	
C89	Reddy, R. et al., "Equivalent Levels of OB Gene Expression in Adipose Tissues of Morbidly Obese and Lean Patients," The Endocrine Society, Programs & Abstracts, 77th Annual Meeting, June 14-17, 1995, Washington, D.C., (ABSTRACT P3-266).	
C90	Rink, "In Search of a Satiety Factor," <i>Nature</i> , 372(1):406-407 (December, 1994).	
C91	Schwartz, M.W. et al., "Specificity of Leptin Action on Elevated Blood Glucose Levels and Hypothalamic Neuropeptide Y Gene Expression in ob/ob Mice," <i>Diabetes</i> , 45:531-535 (April , 1996).	
C92	Shafrir, E., "Animal Models of Non-Insulin-Dependent Diabetes," <i>Diabetes/Metabolism Reviews</i> , 8(3):179-208 (1992).	
C93	Shigemoto, M. et al., "Tissue Distribution of the Obese (ob) Gene Expression in Mice and Augmented Gene Expression in the ob/ob Mice," <i>Diabetes</i> , 44:204A (May, 1995) (ABSTRACT 748).	
C94	Sohda, T. et al., "Studies on Antidiabetic Agents. XII. <sup>1)</sup> Synthesis and Activity of the Metabolites of ( $\pm$ )-5-[p-[2-(5-Ethyl-2-pyridyl)ethoxy]benzyl]-2,4-thiazolidinedione (Pioglitazone)," <i>Chem. Pharm. Bull.</i> , 43(12):2168-2172 (1995).	
C95	Stephens et al., "The Role of Neuropeptide Y in the Antiobesity Action of the <i>Obese</i> Gene Product," <i>Nature</i> , 377:530-532 (October, 1995).	

EXAMINER	DATE CONSIDERED
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance <u>and</u> not considered. Include copy of this form with next communication to applicant.</p>	

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		Filing Date May 10, 1995	Group 1646

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)			
C96	Stirling B. <i>et al.</i> , "Identification of Microsatellite Markers Near the Human ob Gene and Linkage Studies in NIDDM-Affected Sib Pairs," <i>Diabetes</i> , 44: 999-1001 (August, 1995).		
C97	Sugiyama, Y. <i>et al.</i> , "Effects of Pioglitazone on Glucose and Lipid Metabolism in Wistar Fatty Rats," <i>Arzneim.-Forsch./Drug Res.</i> 40(1), Nr. 3:263-267 (1990).		
C98	Sugiyama, Y. <i>et al.</i> , "Effects of Pioglitazone on Hepatic and Peripheral Insulin Resistance in Wistar Fatty Rats," <i>Arzneim.-Forsch./Drug Res.</i> 40(1), Nr. 4:436-440 (1990).		
C99	Swanson, M.L. <i>et al.</i> , "Antidiabetic Agent Pioglitazone Increases Insulin Receptors on 3T3-L1 Adipocytes," <i>Drug Development Research</i> , 35: 69-82 (1995).		
C100	Tartaglia, L.A. <i>et al.</i> , "Identification and Expression Cloning of a Leptin Receptor, OB-R," <i>Cell</i> , 83:1263-1271 (December, 1995).		
C101	Taubes, G., "As Obesity Rates Rise, Experts Struggle to Explain Why," <i>Science</i> , 280:1367-1368 (May, 1998).		
C102	Thomas, S.A. <i>et al.</i> , "Thermoregulatory and metabolic phenotypes of mice lacking noradrenaline and adrenaline," <i>Nature</i> , 387:94-97 (May, 1997).		
C103	Van Zee, K. <i>et al.</i> , "Protection Against Lethal Escherichia coli Bacteremia in Baboons ( <i>Papio anubis</i> ) by Pretreatment with a 55-kDa TNF Receptor (CD120a)-Ig Fusion Protein, Ro 45-2081 <sup>1</sup> ," <i>The Journal of Immunology</i> , 156:2221-2230 (1996).		
C104	Vydelingum S. <i>et al.</i> , "Overexpression of the Obese Gene in the Genetically Obese JCR:LA-Corpulent Rat," <i>Biochemical and Biophysical Research Communications</i> , 216(1):148-153 (November, 1995).		
C105	Walsh, B.T. <i>et al.</i> , "Eating Disorders: Progress and Problems," <i>Science</i> , 280:1387-1390 (May, 1998).		
C106	Watson, T., "What really plumps you up," <i>U.S. News and World Report</i> , Vol. 117, No. 23, pg. 80, reported on December 12, 1994.		
C107	Weigle, D.S., "Appetite and the regulation of body composition," <i>FASEB</i> , 8:302-310 (1994).		

EXAMINER	DATE CONSIDERED
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)			
C108	Weigle <i>et al.</i> , "Recombinant <i>ob</i> Protein Reduces Feeding and Body Weight in the <i>ob/ob</i> Mouse," <i>J. Clin. Invest.</i> , 96:2065-2070 (October, 1995).		
C115	West, D.B. <i>et al.</i> , "Genetics of Dietary Obesity in AKR/J X SWR/J Mice - Segregation of the Trait and Identification of a Linked Locus on Chromosome-4," <i>Mammalian Genome</i> , 5(9):546-552 (September, 1994).		
C110	Wickelgren, I., "Obesity: How Big a Problem?" <i>Science</i> , 280:1364-1367 (May, 1998).		
C111	Willson, T.M. <i>et al.</i> , "The Structure-Activity Relationship between Peroxisome Proliferator-Activated Receptor $\gamma$ Agonism and the Antihyperglycemic Activity of Thiazolidinediones," <i>J. Med. Chem.</i> , 39:665-668 (1996).		
C112	Wilson, B.E. <i>et al.</i> , "Identification of an overfeeding-induced adipocyte 5kb mRNA Lacking Sequence Homology to Known Adipocyte Genes," <i>The Adipose Cell: A Model for Integration of Hormone Signalling in the Regulation of Cellular Function</i> , p. 34 (ABSTRACT CA 318).		
C113	Woods, S.C. <i>et al.</i> ; "Signals That Regulate Food Intake and Energy Homeostasis," <i>Science</i> , 280:1378-1383 (May, 1998).		
C114	Yamakawa, T. <i>et al.</i> , "Augmented Production of Tumor Necrosis Factor- $\alpha$ in Obese Mice," <i>Clinical Immunol. Immunopathol.</i> , 75(1):51-56 (April, 1995).		
C115	Zarjevski <i>et al.</i> , "Chronic Intracerebroventricular Neuropeptide-Y Administration to Normal Rats Mimics Hormonal and Metabolic Changes of Obesity," <i>Endocrinology</i> , 133(4):1753-1758 (1993).		
C116	Zhang, B. <i>et al.</i> , "Down-regulation of the Expression of the <i>Obese</i> Gene by an Antidiabetic Thiazolidinedione in Zucker Diabetic Fatty Rats and <i>db/db</i> Mice," <i>J. Biological Chemistry</i> , 271(16):9455-9459 (April, 1996).		
C117	Zheng, X. <i>et al.</i> , "Administration of Noncytolytic IL-10/Fc in Murine Models of Lipopolysaccharide-Induced Septic Shock and Allogeneic Islet Transplantation," <i>The Journal of Immunology</i> , 154:5590-5600 (1995).		
C118	Zucker, L.M. <i>et al.</i> , "Fatty, A New Mutation in the Rat," <i>J. Heredity</i> , 52:275-278 (1961).		

EXAMINER	DATE CONSIDERED
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(As Amended)

**CERTIFICATE OF MAILING UNDER 37 CFR §1.8**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the ASSISTANT COMMISSIONER FOR PATENTS, WASHINGTON, DC 20231 on 3/6/00.

*Christine E. Dietzel, Ph.D.*  
(Name of depositor)

*Joan A. Santucci 3/6/2000*  
(Signature and Date)

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

In accordance with Applicant's and Applicant's representatives' Duty of Disclosure under 37 CFR § 1.56, and pursuant to 37 CFR §1.97 and MPEP 717.05(b), Applicant(s) submit herewith documentary information for consideration by the Examiner. Information herein cited is only set forth in fulfillment of Applicant's duty of candor in disclosing all information brought to his attention, and is not an admission that it can be used adversely. The publications forwarded herewith are listed on the enclosed Form PTO-1449. Applicant(s) request that the Examiner, upon reviewing the enclosed materials, initial the enclosed form and return a copy thereof in accordance with the instructions on the form.

Enclosed please find copies of References A41 through A42 listed on the attached Form PTO-1449. Reference A41, issued US Patent No. 5,512,457 of Lyman et al., is a priority document for Applicants' earlier disclosed A35 reference. Reference A42, issued US Patent No. 5,098,833 of Lasky et al., is a priority document for Applicants' earlier disclosed A36 reference.

No fee is believed due for the filing of this statement inasmuch as it is being filed before the mailing of the first official action on the merits. However, should the Patent and Trademark Office determine otherwise, authorization is hereby given to charge Deposit Account No. 11-1153 for this filing.

Respectfully submitted,

*Christine E. Dietzel*  
Christine E. Dietzel  
Agent for Applicants  
Registration No. 37,309

KLAUBER & JACKSON  
411 Hackensack Avenue  
Hackensack, New Jersey 07601  
(201) 487-5800  
E-mail: info@kjplaw.com



Form PTO-1449 IRS Y. 7.801 U.S. Department of Commerce Patent and Trademark Office		ATTORNEY	600-1-087CIP1
		SERIAL NO.	08/438,431
LIST OF DOCUMENTARY INFORMATION CITED BY APPLICANT  (Use several sheets if necessary)		APPLICANT	Friedman et al.
		FILING DATE	05/10/95
		GROUP	1646

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE
	A41	5,512,457	4/30/96	Lyman et al.			
	A42	5,098,833	3/24/92	Lasky et al.			

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION YES NO

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)


EXAMINER:	DATE CONSIDERED:
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant	

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT(S): Friedman et al.

SERIAL NO.: 08/438,431

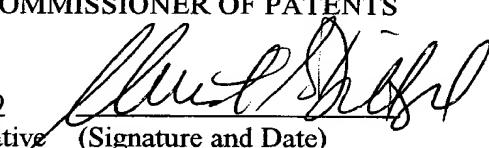
EXAMINER: DRAPER, G.

DATE FILED: May 10, 1995

ART UNIT : 1646

FOR: OB POLYPEPTIDES, MODIFIED FORMS AND  
DERIVATIVES (AS AMENDED)**Certificate of Facsimile Transmission**

I hereby certify that this correspondence is being transmitted via facsimile to the ASSISTANT COMMISSIONER OF PATENTS on March 22, 2000.

Christine E. Dietzel, No. 37,309Name of Registered Representative  (Signature and Date)

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

**INFORMATION DISCLOSURE STATEMENT**

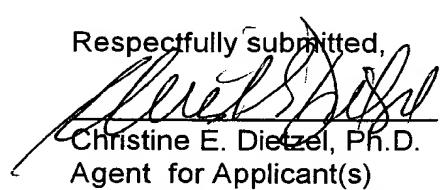
In accordance with Applicant's and Applicant's representatives' Duty of Disclosure under 37 CFR § 1.56, and pursuant to 37 CFR § 1.97 and MPEP 717.05(b), Applicant submits herewith documentary information for consideration by the Examiner. Information herein cited is only set forth in fulfillment of Applicant's duty of candor in disclosing all information brought to his attention, and is not an admission that it can be used adversely. The publications are listed on the enclosed Form PTO-1449. Applicant requests that the Examiner, upon reviewing the enclosed materials, initial the enclosed form and return a copy thereof in accordance with the instructions on the form.

In accordance with 37 C.F.R. §1.56 and §1.97, the references listed on the attached form PTO-1449 are being brought to the attention of the Examiner for consideration in connection with the examination of the above-identified patent application.

Enclosed please find a copy of Reference C119 listed on the attached PTO Form-1449. C119 is the original Genbank entry of the *Mus musculus* obese (ob) mRNA, deposited by Zhang , Y. et al on December 21, 1994. This entry was replaced by the Genbank entry deposited on March 30, 1995, previously disclosed to the Examiner as reference C30 and discussed in the IDS filed on March 8, 2000.

No fee is believed due for the filing of this Information Disclosure Statement. However, should the Patent and Trademark Office determine otherwise, authorization is hereby given to charge Deposit Account No. 11-1153 for this filing.

Respectfully submitted,

  
 Christine E. Dietzel, Ph.D.  
 Agent for Applicant(s)  
 Registration No. 37,309

KLAUBER & JACKSON  
411 Hackensack Avenue  
Hackensack, New Jersey 07601  
(201)487-5800



Form PTO-1449 IRSY. 7.801 U.S. Department of Commerce Patent and Trademark Office		ATTORNEY	600-1-087CIP1
		SERIAL NO.	08/438,431
LIST OF DOCUMENTARY INFORMATION CITED BY APPLICANT (Use several sheets if necessary)		APPLICANT	Jeffrey Friedman et al.
		FILING DATE	May 10, 1995
		GROUP	1646

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION YES NO

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

C119	Genbank Accession No. U18812, <i>Mus musculus</i> obese precursor (ob) mRNA, complete cds., deposited by Zhang, Y. et al., December 21, 1994

EXAMINER:	DATE CONSIDERED:
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant	